New Series, Vol. XIV, March, 1939 No. 1

THE CLEMSON AGRICULTURAL COLLEGE

RECORD

FORTY-SIXTH YEAR

CATALOG NUMBER 1938—1939

ANNOUNCEMENTS 1939-1940

Published quarterly by the Clemson Agricultural College, Clemson, South Carolina. Entered as second class matter April 25, 1905, at the Post Office at Clemson, South Carolina, under the Act of July 16, 1894, now superseded by the Act of August 24, 1912.

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1939

JANUARY

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JANUARY

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COLLEGE CALENDAR

SECOND SEMESTER 1938-1939

Registration, Second Semester	February 6
Final College Examinations end	May 27
Commencement Exercises begin	June 3
Graduating Exercises	June 5
Summer School begins	June 12
Summer School ends	July 22

SESSION 1939-1940

Entrance Examinations	September 11 and 12
Matriculation, new students	September 13
First payment due Treasurer, new students	September 13*
Matriculation, upperclassmen	September 18
First payment due Treasurer, upperclassmen	September 18*
Registration, upperclassmen	September 19
Second payment due Treasurer, all students	November 23*
Thanksgiving Day (holiday)	November 30
Christmas Holidays begin at 12 Noon	December 20
Christmas Holidays end at 10 P.M.	January 2
First Semester ends	February 3
Third payment due Treasurer, all students	February 5*
Registration, Second Semester	February 5
Mid-Year Graduating Exercises	February 6
Fourth Payment due Treasurer, all students	April 5*
Final College Examinations end	May 25
Commencement Exercises begin	June 1
Graduating Exercises	June 3

The above schedule is subject to change by the Faculty.

*Important Note: Settlement of College Fees. The Treasurer of the College is the financial officer, and all transactions relating to payments must be made through him. The entrance payment includes the full cost of uniform, plus fees and living expenses for the first quarter, and must be paid before a student can be assigned to a room in barracks. Other payments are due quarterly in advance as indicated above. A quarterly payment deferred by virtue of reason satisfactory to the Treasurer may be extended at the discretion of the Treasurer for a period not exceeding twenty days. At the expiration of this grace period, the names of those in arrears will be automatically removed from the college rolls.

Remittances should be made in cash, by money order, cashier's check, or local check made payable to S. W. Evans, Treasurer, and should be paid at the Treasurer's Office or mailed directly to S. W. Evans, Treasurer, Clemson, South Carolina.

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BOARD OF TRUSTEES

Life Members

W. W. Bradley, *Chairman*_____Columbia, Richland County
A. F. Lever_____ Columbia, Richland County
Paul Sanders_____Ritter, Colleton County
J. E. Sirrine_____Greenville, Greenville County
Christie Benet_____Columbia, Richland County
T. B. Young_____Florence, Florence County
R. M. Cooper_____Charleston, Charleston County

Term Exrires 1940

F. E. Cope_____Cope, Orangeburg County
W. D. Barnett_____Columbia, Richland County
J. B. Douthit, Jr._____Pendleton, Anderson County

Term Expires 1942

S. H. Sherard_____Ninety Six, Greenwood County
W. C. Graham_____Pamplico, Florence County
Edgar A. Brown_____Barnwell, Barnwell County

S. W. Evans, *Secretary*_____Clemson, S. C.

STANDING COMMITTEES OF BOARD

Agricultural: Sherard, *Chairman;* Young, Cooper, Lever, Sanders, Cope, Douthit.

(This committee is also the Veterinary Committee, the Crop Pest Commission, and the Experiment Station Board of Control.)

Executive: Benet, *Chairman;* Sirrine, Young, Cooper, Brown, Graham.

Fertilizer: Cope, *Chairman;* Sherard, Sanders, Barnett, Douthit, Graham.

*Finance: Benet, Sirrine, Lever, Brown, Barnett, Douthit.

STATED MEETINGS OF BOARD

3:00 P.M.—Third Friday in March.

3:00 P.M.—Third Friday in June.

3:00 P.M.—Fourth Monday in October.

*Chairman to be elected.

BOARD OF VISITORS 1938

A. E. Jury ..... Winnsboro
(Hold-over member)
Adam Haskell ..... Beaufort
Burnet R. Maybank ..... Charleston
J. R. Fairey ..... Fort Motte
J. F. Bland ..... Mayesville
W. D. Morrah ..... Troy
C. L. Cureton ..... Pickens
L. M. Glenn ..... Greenville
P. D. Barron ..... Union
M. E. Brockman ..... Chester
George J. Wilds ..... Hartsville
D. D. Witcover ..... Darlington

OFFICERS CLEMSON ALUMNI CORPORATION

President

Louis Balentine, '23 ..... Greenville, S. C.

First Vice-President

B. B. Bleckley, '28 ..... Anderson, S. C.

Second Vice-President

W. R. Elliott, Jr., '26 ..... Winnsboro, S. C.

Secretary-Treasurer

J. H. Woodward, Ex. '03 ..... Clemson, S. C.

Assistant Treasurer

S. W. Evans, Ex. '02 ..... Clemson, S. C.

Board of Directors

District 1—B. B. Bleckley, '28 ..... Anderson
District 2—W. K. Livingston, Ex. '97 ..... Greenville
District 3—W. R. Elliott, Jr., '26 ..... Winnsboro
District 4—J. S. Thurmond, '23 ..... Edgefield
District 5—W. D. Barnett, '10 ..... Columbia
District 6—George Warren, '08 ..... Hampton
District 7—C. W. Legerton, '03 ..... Charleston
District 8—J. T. Lazar, '12 ..... Florence
District 9—R. H. Fike, '08 ..... Atlanta, Ga.
District 10—F. J. Jervey, '14 ..... Washington, D. C.
District 11—S. R. Finley, '18 ..... Chattanooga, Tenn.
District 12—Frank Breazeale, '96 ..... Tucson, Ariz.
Director at Large—T. W. Thornhill, '14 ..... Charleston
Director at Large—R. B. Waters, '16 ..... Columbia
Director at Large—Louis Balentine, '23 ..... Greenville

OFFICERS OF ADMINISTRATION

ENOCH WALTER SIKES, PH.D., LL.D.
President

CHARLES WARREN WEEKS, COLONEL, INFANTRY, U. S. ARMY
Commandant and P. M. S. and T.

SAMUEL WILDS EVANS
Treasurer and Secretary of Board of Trustees

JAMES CORCORAN LITTLEJOHN, B.S.
Business Manager

LEE W. MILFORD, M.D.
Surgeon

GUSTAVE ERNEST METZ, B.S., M.A.
Registrar

HERBERT PRESS COOPER, PH.D.
Dean, School of Agriculture and
Director, Agricultural Experiment Station

WILLIAM BARRE AULL, B.S.
Vice-Dean, School of Agriculture

RUPERT ALONZO McGINTY, B.S., A.M.
Vice-Director, Agricultural Experiment Station

FRED HARVEY HALL CALHOUN, PH.D.
Dean, School of Chemistry

DAVID WISTAR DANIEL, A.M., LITT.D.
Dean, School of General Science

SAMUEL BROADUS EARLE, A.M., M.E., LL.D.
Dean, School of Engineering

WILLIAM HAROLD WASHINGTON, B.S., M.S.
Dean, School of Vocational Education and
Dean of the Summer School

HORACE HAROLD WILLIS, B.S.
Dean, School of Textiles

BRUCE DAYVAULT CLOANINGER
Secretary, Board of Fertilizer Control

WALTER KEYS LEWIS, V.S., M.D.V.*
Director of Livestock Sanitary Work, State Veterinarian

DAVID WAYNE WATKINS, B.S., M.A.
Director of Extension Service

CORNELIA AYER GRAHAM, B.S.
Librarian

*Office: State Office Building, Columbia, S. C.

FACULTY

ENOCH WALTER SIKES
President
M.A., Wake Forest College; Ph.D., Johns Hopkins University.

ANDERSON, ROBERT LOVELL, *Associate Professor of Architecture.*
A.B., Princeton University, 1925; Graduate Work, Columbia University, 1925-1926; Harvard University, 1929-1930; Summer Work, New York University, 1936.

*ANDREWS, FLOOD SHIELDS, *Associate Professor of Horticulture.*
B.S., Virginia Polytechnic Institute, 1924; M.S., Michigan State College, 1928.

ARMSTRONG, GEORGE MILLER, *Professor of Botany and Bacteriology.*
B.S., Clemson Agricultural College, 1914; M.A., University of Wisconsin, 1917; Ph.D., Missouri Botanical Garden, Washington University, 1921.

AULL, GEORGE HUBERT, *Professor of Agricultural Economics.*
B.S., Clemson Agricultural College, 1919; M.S., University of Virginia, 1928; Ph.D., University of Wisconsin, 1937.

AULL, WILLIAM BARRE, *Vice-Dean, School of Agriculture; Associate Professor of Bacteriology.*
B.S., Clemson Agricultural College, 1907; Graduate Work, University of Virginia, 1909-1910; Iowa State College, Summers 1925, 1927.

BARNETT, DAVID EUGENE, *Assistant Professor of Military Science and Tactics; Assistant Commandant.*
Major, Infantry, U. S. Army; B.S., Clemson Agricultural College, 1915; Graduate, The Infantry School, 1921.

BARTON, CLARENCE RUSSELL, *Assistant Professor of Weaving and Designing.*
B.S., Clemson Agricultural College, 1929.

BLAIR, WILLIAM GARDINER, *Assistant Professor of Carding.*
New Bedford Textile School, 1908.

BOOKER, LEONARD ROWLAND, *Itinerant Teacher-Trainer and Assistant State Supervisor Industrial Education.*
B.S., Clemson Agricultural College, 1925; Graduate Work, University of Chicago, 1927; M.S., University of Tennessee, 1932.

BOWEN, WILLIAM CLAYTON, *Assistant Professor of Agricultural Education.*
B.S., Clemson Agricultural College, 1932; Colorado State College, Summers 1937, 1938.

BRADLEY, MARK EDWARD, *Professor of English.*
A.B., Erskine College, 1898; Graduate Work, University of Chicago, Summers 1904, 1910; University of North Carolina, Summer 1927.

BREARLEY, HARRINGTON COOPER, *Professor of Sociology and Psychology.*
A.B., 1916, M.A., 1917, University of South Carolina; Ph.D., University of North Carolina, 1928; Columbia University, Summer 1933; London School of Economics, 1937-1938.

BROCK, JOHN LELAND, *Assistant Professor of Vocational Education.*
B.S., Clemson Agricultural College, 1927; M.A., George Peabody College, 1936.

*On leave 1938-1939.

BROWN, HUGH MONROE, *Professor of Physics.*
B.A., 1920, M.A., 1921, University of Denver; Ph.D., University of California, 1927.

BURTON, WILLIAM WILDER, *Assistant Professor of Mathematics.*
Ph.B., Brown University, 1906; M.A., Mercer University, 1918.

CALHOUN, FRED HARVEY HALL, *Dean, School of Chemistry and Geology, Professor of Geology and Mineralogy.*
B.S., 1898, Ph.D., 1902, University of Chicago.

CAMPBELL, THOMAS ALEXANDER, JR., *Assistant Professor in Textiles.*
B.S., Clemson Agricultural College, 1928.

CARODEMOS, PETER, *Associate Professor of Chemistry.*
B.S., Tufts College, 1922; Ph.D., Cornell University, 1927.

CARTEE, EUGENE FRANKLIN, *Acting Associate Professor of Warp Preparation and Knitting.*
B.S., Clemson Agricultural College, 1925; M.S., University of Tennessee, 1937.

CLARKE, ELWYN LORENZO, *Professor of Civil Engineering.*
B.S. in C.E., 1902, C.E., 1931, University of Illinois.

COLLINGS, GILBEART HOOPER, *Associate Professor of Agronomy.*
B.S., Virginia Polytechnic Institute, 1915; M.S., University of Illinois, 1917; Ph.D., Rutgers University, 1925.

COOPER, HERBERT PRESS, *Dean, School of Agriculture; Director, Agricultural Experiment Station; Professor of Agronomy.*
B.S., Clemson Agricultural College, 1911; M.S., University of Wisconsin, 1916; Ph.D., Cornell University, 1922.

CRANDALL, WILL GILES, *Professor of Vocational Education.*
B.S., Cornell University, 1918; Graduate Work, Cornell University, Summers 1929, 1930, 1931.

*CREDLE, ALEXANDER BERRY, *Assistant Professor of Electrical Engineering.*
E.E., 1930, M.E.E., 1931, Cornell University.

CROUCH, SYDNEY, J. L., *Professor of Religion.*
Scotch College, Western Australia, 1910; Biblical Seminary, New York, 1915; B.D., Hartford Theological Seminary, 1922; Th.D., Union Theological Seminary, Richmond, Virginia, 1937.

CURTIS, DONALD DEXTER, *Professor of Mechanics and Hydraulics.*
B.E., 1919, M.S., 1931, University of Iowa; Graduate Work, University of Washington.

DANIEL, DAVID WISTAR, *Dean, School of General Science, Professor of English.*
A.B., Wofford College, 1892; M.A., Vanderbilt University, 1901; Graduate Work, University of Chicago, Summer 1899; Litt.D., Wofford College, 1914.

DAVIS, JOE WALLACE, *Assistant Coach.*
B.S., Southwestern, 1929.

DUMAS, ALBERT HUGH, *Assistant Professor of Military Science and Tactics, Assistant Commandant and Adjutant.*
Major, Infantry, U. S. A.; B.S., Alabama Polytechnic Institute, 1917; Graduate, The Infantry School, 1926.

*On leave 1938-1939.

DUNAVAN, DAVID, *Assistant Professor of Entomology and Zoology.*
B.S., Oregon Agricultural College, 1925; M.S., Iowa State College, 1928; Graduate Work, Cornell University, Summers 1929, 1931, 1935.

DUNLAP, GEORGE HEYWARD, *Acting Assistant Professor of Carding and Spinning.*
B.S., Clemson Agricultural College, 1928; Graduate Work, University of North Carolina, Summer 1935; Massachusetts Institute of Technology, Summer 1936.

EARLE, SAMUEL BROADUS, *Dean, School of Engineering, Professor of Mechanical Engineering, Director of Engineering Experiment Station.*
A.B., 1898, A.M., 1899, Furman University; M.E., Cornell University, 1902; LL.D., Furman University, 1932; General Electric Company.

EATON, ROBERT KNIGHT, *Professor of Carding and Spinning.*
A.B., Bowdoin College, 1905; Graduate Work, Philadelphia Textile School.

EDMOND, JOSEPH BAILEY, *Associate Professor of Horticulture.*
B.S., Michigan State College, 1923; M.S., Iowa State College, 1924; Ph.D., University of Maryland, 1933.

EDWARDS, GEORGE HERBERT, JR., *Assistant Professor of Mathematics.*
B.A., 1913, M.A., University of South Carolina; Graduate Work, University of Chicago and Columbia University.

FEELEY, ROBERT OLIVER, *Professor of Veterinary Science.*
D.V.S., New York University, 1906.

FERNOW, BERNHARD EDWARD, *Professor of Mechanical Engineering.*
A.B., 1904, M.E., 1906, Cornell University.

FERRIER, WALLACE THOMAS, *Associate Professor of Agricultural Economics.*
A.B., Tarkio College, 1910; M.S., Colorado State College, 1930; Graduate work, University of Colorado; Ph.D., University of Minnesota, 1938.

FITZ PATRICK, THOMAS KEVIN, *Assistant Professor of Architecture.*
B.Arch., 1932, M.Arch., 1933, Massachusetts Institute of Technology; Graduate Research in Architectural Education, Massachusetts Institute of Technology, 1934.

FREEMAN, EDWIN JONES, *Associate Professor of Machine Shop.*
B.S., Clemson Agricultural College, 1922.

*FULMER, JOHN LEONARD, *Assistant Professor of Agricultural Economics.*
B.S., Clemson Agricultural College, 1933; M.S., Cornell University, 1937.

GAMMON, JAMES POLK, *Assistant Professor of Military Science and Tactics, Assistant Commandant.*
Major, Infantry, U. S. A.; A.B., Fredericksburg College, 1913; Graduate Company Officers Course, The Infantry School, 1926.

GATES, JAMES EDWARD, *Professor of Economics and Government.*
B.S., University of Kentucky, 1929; Graduate Work, University of Kentucky, 1929-1930; University of Chicago, 1930-1931; University of Virginia, 1931-1933; Ph.D., University of Virginia, 1935.

GLENN, HOWARD EMMITT, *Associate Professor of Civil Engineering.*
B.S. in C.E., 1922, C.E., 1927, University of Kentucky.

GODFREY, WILLIAM EMERA, *Professor of Physics.*
A.B., 1893, A.M., 1898, Mercer University; Graduate Work, Summer Quarters 1898, 1899, 1900, University of Chicago; 1906-1907, Cornell University.

*On leave 1938-1939.

GOODALE, BEN EDMUND, *Associate Professor of Dairying.*
B.S., 1922, M.S., 1929, Iowa State College.

GOODE, JOHN K., *Assistant Professor of Religion.*
A.B., Richmond College, 1898; Graduate of Crozer Theological Seminary, 1901.

GREEN, JOSEPH COLEMAN, *Assistant Professor of English.*
B.A., 1920, M.A., 1924, Vanderbilt University; Graduate Work, George Peabody College for Teachers, Summers 1930, 1932, 1934; Ph.D., Vanderbilt University, 1937.

HARRIS, DAVID NIVIN, *Assistant Professor of Drawing.*
B.S., Clemson Agricultural College, 1908.

HENDRICKS, JESSE CODY, *Associate Professor of Physics.*
B.S., 1925, M.A., 1928, Franklin College; Ph.D., Indiana University, 1930.

HODGE, WYLIE FORT DUPRE, *Assistant Professor of Architecture.*
Clemson Agricultural College; New York School of Fine and Applied Arts, 1915-1916, 1920-1921; Further Work, RR. Gallerie di Firenze, Italy, Summer 1931.

HOLMES, ALESTER GARDEN, *Professor of History.*
B.S., The Citadel, 1897; Graduate Work, University of Chicago, Summer 1911.

HOWARD, FRANK JAMES, *Assistant Coach.*
B.S., University of Alabama, 1931.

HUFF, LORENZ DITMAR, *Assistant Professor of Physics.*
A.B., 1927, M.S., 1928, Oklahoma University; Ph.D., California Institute of Technology, 1931.

HUFFORD, GLENN DEWITT, *Assistant Professor of Military Science and Tactics, Assistant Commandant.*
Major, Infantry, U. S. A.; Graduate Company Officers' Course, The Infantry School, 1925.

HUNTER, HOWARD L., *Associate Professor of Chemistry.*
B.Chem., 1925, Ph.D., 1928, Cornell University.

HUNTER, JOSEPH EVERETT, *Professor of Mathematics.*
B.S., Clemson Agricultural College, 1896; Graduate Work, University of Chicago, Summers 1902, 1904, 1910; University of North Carolina, Summer 1928.

JOHNSON, WILLIS EDWIN, *Assistant Professor of Agricultural Education.*
B.S., Mississippi A. and M. College, 1922; Graduate Work, Cornell University, Summer 1931.
(In charge of Agricultural Education work at Seneca, S. C.)

JONES, ROBERT MORGAN, *Assistant Coach.*
B.S., Clemson Agricultural College, 1930.

KINARD, FRANCIS MARION, *Associate Professor of English.*
A.B., Wofford College, 1923; A.M., University of North Carolina, 1929.

KIRKLEY, FRANCIS EDWARD, *Assistant Professor of Vocational Education*
B.S., Clemson Agricultural College, 1929.
(In charge of Agricultural Education work, Central, S. C.)

KLUGH, WILLISTON WIGHTMAN, *Associate Professor of Drawing.*
B.S., Clemson Agricultural College, 1896; Graduate Work, Vanderbilt University, 1898; Cornell University, 1900.

LAMASTER, JOSEPH PAUL, *Professor of Dairying.*
B.S., 1913, M.S., 1928, University of Kentucky.

LANE, JOHN DEWEY, *Associate Professor of English.*
A.B., Newberry College, 1920; M.A., University of Virginia, 1924; Graduate Work, Columbia University, 1923 and 1928-1929.

LEE, RUDOLPH EDWARD, *Professor of Architecture.*
B.S., 1896, M.Arch., 1928, Clemson Agricultural College; Graduate Work, Cornell University; University of Pennsylvania; Zanerian Art School.

LINDSAY, JOSEPH, JR., *Professor of Textile Chemistry and Dyeing.*
A.B., Erskine College, 1919; Graduate Work, University of North Carolina, University of Chicago, and Philadelphia Textile School.

LIPPINCOTT, WILLIAM LEROY, *Professor of Chemistry.*
B.Chem., 1918, Graduate Work, 1920-1921, Cornell University.

LUCAS, JOHN PAUL, *Assistant Professor of English.*
A.B., Duke University, 1930; M.S., State College of the University of North Carolina, 1931; A.M., Princeton University, 1933; Graduate Work, Princeton University, 1931-1932, 1932-1933.

MCGINTY, RUPERT ALONZO, *Vice-Director of Agricultural Experiment Station.*
B.S., Alabama Polytechnic Institute, 1913; A.M., Washington University, 1919; Cornell University, 1926-1927.

MCKENNA, ARTHUR ERNEST, *Associate Professor of Weaving and Design.*
Graduate Rhode Island School of Design, 1922; Bradford-Durfee Textile School; B.S., Clemson Agricultural College, 1930; M.S., University of Tennessee, 1933.

MACLACHLAN, JOHN DOUGLAS, *Assistant Professor of Botany.*
B.A., Hon., Queen's University, 1931; A.M., 1933, Ph.D., 1935, Harvard University.

MARSHALL, JOHN LOGAN, *Associate Professor of Wood Work.*
Georgia School of Technology; B. S., Clemson Agricultural College, 1909; Bradley Polytechnic Institute, 1919.

MARTIN, SAMUEL MANER, *Professor of Mathematics.*
B.S., The Citadel, 1896; Graduate Work, Cornell University, Summer 1900; Harvard University, Summer 1904; University of Chicago, Summer 1908.

MILLS, WILLIAM HAYNE, *Professor of Rural Sociology.*
A.B., Davidson College, 1892; B.D., Columbia Theological Seminary, 1897.

MITCHELL, JACK HARRIS, *Professor of Chemistry.*
B.S., 1903, M.S., 1904, Alabama Polytechnic Institute; M.S., University of Illinois, 1911.

MONROE, JAMES BEASLEY, *Acting Associate Professor of Vocational Education.*
B.S., Clemson Agricultural College, 1915; M.S., Texas A. & M. College, 1935; Graduate Work, Cornell University, Summer 1938.

MORGAN, CHARLES LEE, *Professor of Poultry Husbandry.*
B.S., 1918, M.S., 1927, University of Kentucky; Graduate Work, University of Wisconsin, 1931-1932.

MUSSER, ALBERT MYERS, *Professor of Horticulture.*
B.S., University of Florida, 1918; Graduate Work, Michigan State College, 1930, 1933.

NEELY, JESS C., *Head Coach of Intercollegiate Athletics.*
LL.B., Vanderbilt University, 1924.

NEWMAN, CHARLES CARTER, *Professor of Horticulture.*
Alabama Polytechnic Institute; B.S., Clemson Agricultural College.

NUTT, GEORGE B., *Associate Professor of Agricultural Engineering.*
B.S. in Agricultural Engineering, Mississippi State College, 1930; Graduate Work, Iowa State College, Summers 1934, 1937; Training course, International Harvester Company, 1931, 1932.

ORENS, IRVING PEARY, *Assistant Professor of Physics.*
B.S., University of Virginia, 1926; M.A., Columbia University, 1928; Ph.D., University of Virginia, 1934; Graduate Work, Yale University, 1930-1931; University of Berlin, Germany, 1931-1932.

PATRICK, CHARNER SCAIFE, *Head Farms Department.*
B.S., Clemson Agricultural College, 1913; Graduate Work, Iowa State College, winter quarter 1930, summer quarter 1931.

PETERSON, VERD, *Consulting Professor of Agricultural Education, State Supervisor of Agricultural Education, Columbia, S. C.*

PHILPOT, CLAUDE PAUL, *Assistant Professor of Forge and Foundry.*
B.S., Clemson Agricultural College, 1928; Training course, Bethlehem Steel Company, 1928.

POLLARD, FRANK H., *Professor of Chemistry.*
B. of Chem., 1916, Ph.D., 1922, Cornell University.

*QUATTLEBAUM, ALEXANDER MCQUEEN, *Assistant Professor of Civil Engineering.*
B.S., Clemson Agricultural College, 1934; M.S., Cornell University, 1935.

REED, ALBERT RAYMOND, *Assistant Professor of Physics.*
A.B., Wofford College, 1925; M.S., University of South Carolina, 1931.

RHODES, SAM ROSEBOROUGH, *Professor of Electrical Engineering.*
B.S., 1900, M.S., 1901, Furman University; B.S., 1907, E.E., 1928, Clemson Agricultural College; General Electric Company; Westinghouse Electric and Manufacturing Company.

RHYNE, ORESTES PEARL, *Professor of Modern Languages.*
A.B., Lenoir-Rhyne College, 1907; A.B., 1908, A.M., 1909, University of North Carolina; Ph.D., Johns Hopkins University, 1913; University of Heidleberg, Summer 1914; University of Leipsig, 1922.

RICE, MYRON ARTHUR, *Assistant Professor of Botany.*
B.S., University of California, 1916; M.S. in Agriculture, Cornell University, 1925.

RITCHIE, ROBERT RUSSELL, *Assistant Professor of Animal Husbandry.*
B.S., 1926, M.S., 1938, Iowa State College.

ROSENKRANS, DUANE B., *Associate Professor of Botany.*
A.B., Upper Iowa University, 1911; M.A., University of Wisconsin, 1917.

SAMS, JAMES HAGOOD, JR., *Assistant Professor of Mechanical Engineering.*
B.S., Clemson Agricultural College, 1924; E.E., Cornell University, 1926; M.S. in Mechanical Engineering, 1931, Ph.D., 1937, University of Michigan.

SHANKLIN, AUGUSTUS G., *Professor Emeritus of Mathematics.*
B.S., The Citadel, 1893; Graduate Work, Cornell University, Summer 1908; Columbia University, Summer 1911.

SHELDON, DAWSON C., *Associate Professor of Mathematics.*
B.S., State College of Washington, 1925; M.A., 1927, Ph.D., 1929, University of California.

SHENK, DONALD H., *Associate Professor of Mechanical Engineering.*
B.S., M.E., Purdue University, 1924; Graduate Work, Purdue University, 1927-1929; S.P.E.E., Summer School 1929.

SHERMAN, FRANKLIN, *Professor of Entomology and Zoology.*
B.S., Agriculture, Cornell University, 1900; M.S., University of Maryland, 1912.

SLONE, HORACE EVANS, *Assistant Professor of Electrical Engineering.*
E.E., Syracuse University, 1927; General Electric Company.

*In place of J. A. Stevenson, on leave.

**SMITH, HOWARD GODWIN, *Assistant Professor of Electrical Engineering.*
E.E., 1930, M.E.E., 1931, Ph.D., 1937, Cornell University.

STARKEY, LAWRENCE VINCENT, *Professor of Animal Husbandry.*
B.S., University of Illinois, 1914; M.S., University of Wisconsin, 1917; Graduate Work, University of Wisconsin, 1930.

*STEVENSON, JAMES ANNE, *Assistant Professor of Civil Engineering.*
B.C.E., University of Arkansas, 1925; M.S., Iowa State College, 1927.

STRIBLING, BRUCE HODGSON, *Associate Professor of Vocational Education.*
B.S., Clemson Agricultural College, 1918; Graduate Work, George Peabody College, Summers 1927, 1929.

TARRANT, WILLIAM EDWARD, *Assistant Professor of Weaving.*
B.S., Clemson Agricultural College, 1927; Alabama Polytechnic Institute, Summer 1932; Clemson Agricultural College, Summer 1938.

TATE, HAROLD SIMMONS, *Associate Professor of Vocational Education.*
B.S., Clemson Agricultural College, 1925; M.A., Columbia University, 1929; George Peabody College, Summers 1927, 1931, 1932; Pennsylvania State College, Summers 1936, 1937, 1938.

TAYLOR, RUPERT, *Associate Professor of English.*
A.B., 1903, A.M., 1906, University of Arkansas; Ph.D., Columbia University, 1911.

TINGLEY, FREEMAN THAYER, *Professor of Electrical Engineering.*
B.S., 1922, E.E., 1935, Bucknell; M.S., University of Illinois, 1929; Course, Westinghouse Company.

TURNER, BENJAMIN RYAN, *Consulting Professor of Industrial Education.*
A.B., 1926, M.A., 1931, Wofford College; Clemson College, Summer 1927; Graduate Work, University of Cincinnati, 1934-1935 and Summer 1936.

WALTHOUR, RUSSELL FLEMING, JR., *Assistant Professor of Military Science and Tactics, Assistant Commandant.*
Major, Infantry, U. S. Army; B.S., Alabama Polytechnic Institute, 1916; Graduate, The Infantry School, 1922.

WARD, JAMES EDWARD, JR., *Professor of Economics and Government.*
B.S., 1929, M.S., 1931, University of Virginia; Graduate Work, Harvard University, 1932-1933; Ph.D., University of Virginia, 1935.

WASHINGTON, WILLIAM HAROLD, *Dean, School of Vocational Education, Dean of the Summer School.*
B.S., Clemson Agricultural College, 1920; M.S., Iowa State College, 1922; Graduate Work, Georgia School of Technology, Summer 1925; George Peabody College, Summers 1928, 1929; 1932-1933.

WEEKS, CHARLES WARREN, *Professor of Military Science and Tactics, Commandant of Cadets.*
Colonel, Infantry, U. S. Army; B.S., University of Nebraska, 1898; Honor Graduate Command and General Staff School, 1911; Graduate General Staff Class, 1912; Graduate Army War College, 1920; Member of Initial General Staff List.

WHITE, DAVID GRAMMER, *Acting Assistant Professor of Horticulture.*
B.S., M.A., 1938, University of Missouri.

WHITE, THOMAS ARLINGTON, *Professor of Vocational Education.*
B.S., 1924, M.S., 1929, North Carolina State College; Ph.D., Cornell University, 1933.

WILLIAMS, BARNETT OSBORNE, *Professor of Rural Sociology and Statistics.*
B.S., Clemson Agricultural College, 1918; M.S., University of Virginia, 1929; Ph.D., University of Minnesota, 1938.

WILLIS, HORACE HAROLD, *Dean, School of Textiles.*
B.S., Clemson Agricultural College, 1917.

ZURBURG, FREDERICK WILLIAM, *Assistant Professor of Chemistry.*
B.S., 1927, M.S., 1928, University of North Carolina.

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*On leave 1938-1939.
**In place of A. B. Credle, on leave.

INSTRUCTORS

ALEXANDER, RUFUS CLIFTON, *Vocational Education.*
B.S., Clemson Agricultural College, 1929; Graduate Work, University of South Carolina, Summer 1930; Cornell University, Summer 1931.

BELL, FRANCIS LANEY, *Graduate Assistant, Chemistry.*
B.S., Clemson Agricultural College, 1938.

BELL, MARSHALL CORNETT, *Mathematics.*
A.B., 1933, M.A., 1936, University of North Carolina.

BING, WILLIAM KYGER, *Agricultural Economics and Rural Sociology.*
B.S., University of Virginia, 1936.

BLALOCK, THOMAS JACKS, *Graduate Assistant, Chemistry.*
B.S., Presbyterian College, 1931.

BOESCH, JOHN CHRISTIAN, *Graduate Assistant, Chemistry.*
B.S., Clemson Agricultural College, 1938.

BOONE, JACK HAPPEL, *English.*
B.A., 1930, M.A., 1931, Vanderbilt University; Graduate Work, Vanderbilt University, 1931-1932.

BRANCH, JAMES STROTHER, *Engineering.*
B.S., Clemson Agricultural College, 1936.

CHAPMAN, JAMES KIBLER, *Assistant in Woodshop.*
B.S., Clemson Agricultural College, 1938.

COKER, EDWARD CALEB, JR., *Mathematics.*
A.B., University of South Carolina, 1928; M.A., University of North Carolina, 1930; Graduate Work, Brown University, 1932; Graduate Work, University of Chicago, Summers 1936, 1938.

DEAN, JORDAN ARTHUR, *English and French.*
A.B., Wofford College, 1933; M.A., Vanderbilt University, 1934; University of Illinois, 1937.

DEMOTT, OTIS ALPHONSO, *Military Science and Tactics, Sergeant in Commandant's Office.*
Sergeant, DEML, Infantry, U. S. Army.

DICKERT, YANCY JACKSON, *Graduate Assistant, Chemistry.*
A.B., Newberry College, 1938.

DOUGLASS, GEORGE ARCHIBALD, *Assistant in Drawing.*
B.S., Clemson Agricultural College, 1931.

DOWNS, JAMES B. T., *Mechanical Engineering.*
M.E., 1934, M.S., 1938, Stevens Institute of Technology.

DURHAM, FRANCIS MARION, *English.*
A.B., University of South Carolina, 1934; M.A., University of North Carolina, 1937; Summer School, University of North Carolina, 1938.

*EPTING, CARL LAFAYETTE, *History and Government.*
A.B., Newberry College, 1921; A.M., University of South Carolina, 1925; Graduate Work, University of South Carolina, 1926, 1928, 1932-1934; University of North Carolina, Summers 1927, 1928.

*On leave 1938-1939.

GAGE, GASTON, *Acting Instructor, Textile Industry.*
B.S., Clemson Agricultural College, 1921; Graduate Work, University of North Carolina, Summers 1935, 1936.

GAUGH, ROBERT HUGH, *English.*
B.A., Union University, 1932; M.A., Vanderbilt University, 1937.

GEE, ROBERT ESTES, *Chemistry and Geology.*
A.B., Newberry College, 1931; M. A., University of North Carolina, 1934.

HAWKINS, GARY FRED, *Chemistry.*
B.S., Newberry College, 1935.

HEATH, HENRY SANFORD, *Military Science and Tactics, Sergeant-Major in Commandant's Office.*
Sergeant, DEML, Infantry, U. S. Army.

HELTON, KENNEY RIXIE, *Military Science and Tactics, Sergeant in Commandant's Office.*
Sergeant, DEML, Infantry, U. S. Army.

*HENRY, NATHANIEL H., *English.*
A.B., 1929, A.M., 1933, University of North Carolina.

HICKS, WILLIAM LYLES, *Textile Chemistry and Dyeing.*
B.S., Clemson Agricultural College, 1931; Furman University, Summer 1938.

HODGES, BAXTER H., *Chemistry.*
B.S., Clemson Agricultural College, 1933; Graduate Work, University of North Carolina, Summer 1936.

HUCKABEE, MARVIN L., *Textile Chemistry and Dyeing.*
B.S., Clemson Agricultural College, 1933; Graduate Work, University of North Carolina, Summers 1935, 1936, 1937, 1938.

JONES, JESS WILLARD, *Agronomy.*
B.S., Clemson Agricultural College, 1937; M.S., Cornell University, 1938.

JONES, JOSEPH CROSBY, *Graduate Assistant, Botany and Bacteriology.*
B.S., Clemson Agricultural College, 1937.

JONES, ROBERT HENRY, *Agricultural Engineering.*
B.S. in Agricultural Engineering, Mississippi State College, 1935; Graduate Work, Virginia Polytechnic Institute, Summer 1936.

KELLY, LOUIS GRANT, *Mathematics.*
B.S., Clemson Agricultural College, 1937; Graduate Work, University of North Carolina, Summer 1938.

**KENDRICK, J. EARLE, *History and Government.*
A.B., University of North Carolina, 1935; M.A., Emory University, 1936; Graduate Work, Harvard University, 1936-1937; University of North Carolina, 1937-1938.

KIRCHNER, GEORGE FREDERICK, *Vocational Education.*
B.S., Clemson Agricultural College, 1933; Graduate Work, Y. M. C. A. Graduate School, 1933; Springfield College, Summer 1934; M.S., Louisiana State University, 1938.

KIRKWOOD, CHARLES EDWARD, JR., *Mathematics and Physics.*
A.B., Lynchburg College, 1935; M.S., University of Georgia, 1937.

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*On leave 1938-1939.
**In place of C. L. Epting, on leave.

LIPSCOMB, RALPH WALDO, *Agronomy.*
B.S., Clemson Agricultural College, 1928; M.S., Michigan State College, 1930.

MCALISTER, HAROLD JESSE, *Graduate Assistant, Botany and Bacteriology.*
B.S., Clemson Agricultural College, 1934.

MASSEY, JOE THOMAS, *Electrical Engineering.*
B.S., State College of University of North Carolina, 1938.

MILLER, WILLIAM GILBERT, *Mathematics.*
A.B., Birmingham Southern College, 1931; M.A., University of Florida, 1933.

NEWSOM, SHELDON MORRIS, *Textiles.*
B.S., Clemson Agricultural College, 1934.

SHIGLEY, JOSEPH EDWARD, *Mechanical Engineering.*
B.S. in E.E., 1931, B.S. in M.E., 1932, Purdue University.

STOKELY, DAVE ROBERTSON, *Graduate Assistant, Chemistry.*
B.S., Clemson Agricultural College, 1938.

VANDIVERE, EDGAR, *Physics.*
A.B., Emory University, 1934; M.A., Duke University, 1935.

WALKER, R. CASPER, *History and Government.*
A.B., 1935, M.A., 1937, Emory University.

WALTERS, JOHN VERNON, *Textiles.*
B.S., Clemson Agricultural College, 1933; Summer 1938.

WARE, ROBERT EDWARD, *Zoology and Entomology.*
B.S., Iowa Wesleyan College, 1929; Graduate Work, Iowa State College, Summers 1931, 1932, 1938.

WILKINSON, HARRY JOHN, *Military Science and Tactics, Assistant to Military Property Custodian.*
Sergeant, DEML, Infantry, U. S. Army.

STANDING COMMITTEES OF THE FACULTY
1938-1939

The President is *ex officio* a member of all committees.

ADMISSIONS:
Daniel, *Chairman;* Calhoun, Cooper, Holmes, Martin, Metz.

ADVANCED COURSES:
Brown, Cooper, Hunter, H. L., Sams, White, Registrar, *ex officio.*

ASSEMBLIES AND LECTURES:
Daniel, *Chairman;* Bradley, Crouch, Earle, Freeman, Lippincott.

ATHLETICS:
Milford, *Chairman;* Gage, Mitchell, Rhodes, Watkins, J. C. Littlejohn, Business Manager, *ex officio;* G. E. Metz, Registrar, *ex officio.*

AWARDS AND HONORS:
Daniel, *Chairman;* Armstrong, Carodemos, Curtis, McKenna. Monroe.

CATALOG:
President Sikes, *Chairman;* Brearley, Littlejohn, Metz, Washington.

DAY AND SPECIAL STUDENTS:
Metz, *Chairman;* Holtzendorff, Littlejohn, The Commandant.

DEFICIENT STUDENTS:
Kinard, *Chairman;* Burton, Hunter, J. E., Brown, Goodale, Pollard.

FACULTY PROGRAM:
Goodale, *Chairman;* Brown, Rosenkrans, Ward, Sams, MacLachlan. Hunter, H. L.

LIBRARY:
The Librarian, *Chairman;* Calhoun, Lee, R. E., Holmes, Lane, Mills, Rhyne, Brearley.

REEXAMINATION AND PROMOTION:
Metz, *Chairman;* Aull, W. B., Calhoun, Daniel, Earle, Kinard, Mitchell, Martin, Tate, Willis.

SCHEDULE:
Metz, *Chairman;* Aull, Dumas, Gage, Heath, Kinard, Pollard, Rhodes, Sams, Tate.

SECONDARY SCHOOLS RELATIONS:
Metz, *Chairman;* Booker, Kinard, Marshall, Sherman, Washington.

STUDENT LOANS:
Littlejohn, *Chairman;* Evans, Woodward.

STUDENT ORGANIZATIONS:
Eaton, *Chairman;* Calhoun, Collings, Freeman, Marshall, Taylor.

STUDENT PUBLICATIONS:
Lane, *Chairman;* Littlejohn, Sherman, J. E.

UNIFORM:
Littlejohn, *Chairman;* Douthit (Trustee-Member), Eaton, Evans, The Commandant.

VISITORS:
Woodward, *Chairman;* Littlejohn, Metz, The Commandant.

OTHER OFFICERS

JACOB HENRY WOODWARD—*Assistant to the President*
VIRGINIA EARLE SHANKLIN—*Secretary to the President*
JOHN WALLACE LAGRONE, B.S., M.A.—*Assistant Registrar*
KENNETH NOTLEY VICKERY, B.S.—*Assistant to the Registrar*
JEAN BEVERLEY SLOAN—*Assistant to the Registrar*
FLORENCE ESTELLE GEE—*Stenographer Registrar's Office*
BRANTLY LEAVELL JOHNSTONE, A.B.—*Stenographer Registrar's Office*
ELIZABETH KELLY, B.S.—*Stenographer Registrar's Office*
MARY CONRAD STEVENSON, A.B.—*Assistant Librarian*
JANE LLEWELLYN MCDANIEL, A.B., A.B. in L.S.—*Assistant to the Librarian*
ANTOINETTE HARRISON EARLE, A.B.—*Assistant to the Librarian*
JOSEPH EDGAR SHERMAN, B.S.—*Athletic Publicity Director*
THOMAS EDWARD STANLEY, B.S.—*Assistant in Business Manager's Office*
MARY LEIGHTON MILLS RITCHIE, B.S.—*Assistant to the Business Manager*
BOYCE B. BURLEY—*Bookkeeper*
ANDREW JOSEPH BROWN, B.S.—*Bookkeeper*
HAROLD D. COCHRAN—*Assistant Bookkeeper*
LEWIS DANIEL MALPHRUS, B.S.—*Clerk, Treasurer's Office*
HELEN MORRISON—*Assistant to Treasurer*
IRENE JULIAN, R.N.—*Drug Nurse and Dietician*
MYRTLE DEAN—*X-Ray and Laboratory Technician*
JOSEPH M. GLASCOCK, R.N.—*General Nursing*
GLADYS MITCHELL, R.N.—*Assistant Nurse*
VIRGINIA HAYNES—*Assistant Nurse*
ANNIE I. LINDSAY, R.N.—*Assistant Nurse and Assistant Dietician*
BLANCHE F. GLASCOCK—*Secretary to the College Surgeon*
DAVID J. WATSON, B.S.—*Supt. of Campus, Roads and Buildings*
JAMES DOUGLAS HARCOMBE—*Mess Officer*
RUDOLPH E. LEE, A.I.A.—*College Architect*
PRESTON BROOKS HOLTZENDORFF, JR., LL.B.—*General Secretary, Y. M. C. A.*
JOHN ROY COOPER, B.S.—*Associate Secretary, Y. M. C. A.*
JOHN K. GOODE, A.B.—*Pastor Baptist Church*
DONALD E. VEALE—*Rector Episcopal Church*
SYDNEY J. L. CROUCH, B.D., Th.D.—*Pastor Presbyterian Church*
DAVID ARTHUR CLYBURN, A.B., B.D.—*Pastor Methodist Church*
HENRY L. SPIESMAN—*Pastor St. Andrews Catholic Church*

AGRICULTURAL EXPERIMENT STATION STAFF

Board of Control

HONORABLE SAM H. SHERARD.....Ninety Six
HONORABLE W. W. BRADLEY, *Ex-Officio*.....Columbia
HONORABLE T. B. YOUNG.....Florence
HONORABLE A. F. LEVER.....Columbia
HONORABLE PAUL SANDERS.....Ritter
HONORABLE F. E. COPE.....Cope
HONORABLE R. M. COOPER.....Columbia
HONORABLE J. B. DOUTHIT.....Pendleton

E. W. SIKES, PH.D., LL.D.....*President*
H. P. COOPER, PH.D.....*Director*
R. A. MCGINTY, A.M.....*Vice-Director*

Agricultural Economics and Rural Sociology

G. H. Aull, Ph.D.....Agricultural Economist
B. O. Williams, Ph.D.....Rural Sociologist
W. T. Ferrier, Ph.D.....Associate Agricultural Economist
H. L. Fulmer, Ph.D.....Associate Rural Sociologist
*J. L. Fulmer, M.S.A.....Assistant Agricultural Economist
Ernest Riley, B.S.....Assistant Agricultural Economist
**H. A. White, B.S.....Assistant Agricultural Economist

Agronomy

H. P. Cooper, Ph.D.....Agronomist
W. R. Paden, Ph.D.....Associate Agronomist
Frank Moser, Ph.D.....Associate Agronomist
G. B. Killinger, Ph.D.....Associate Soil Scientist
H. T. Polk, Ph.D.....Associate Agronomist
J. W. Jones, M.S.....Assistant Agronomist
H. A. Einstein, Ph.D.....Hydraulic Engineer
G. B. Nutt, B.S.....Assistant Agricultural Engineer
G. H. Dunkelberg, M.S.....Assistant Agricultural Engineer

Animal Husbandry

L. V. Starkey, M.S.....Animal Husbandman
E. G. Godbey, B.S.....Associate Animal Husbandman
G. W. Anderson, D.V.M., M.S.....Associate Animal Pathologist

Botany and Bacteriology

G. M. Armstrong, Ph.D.....Botanist and Plant Pathologist
W. B. Aull, B.S.....Associate Bacteriologist
C. H. Arndt, Ph.D.....Associate Botanist and Plant Pathologist
W. B. Albert, Ph.D.....Associate Plant Physiologist

*On leave 1938-1939.
**In cooperation with the United States Department of Agriculture.

C. C. Bennett, B.S.---Assistant in Botany
**Richard Weindling, Ph.D.---Agent
**B. S. Hawkins, B.S.---Agent
**G. W. Boozer, Jr., B.S.---Agent
**W. B. Keller, B.S.---Agent

Chemistry

J. H. Mitchell, M.S.---Chemist
D. B. Roderick, B.A.---Assistant Chemist
E. J. Lease, Ph.D.---Associate Chemist

Dairy

J. P. LaMaster, M.S.---Dairyman
G. H. Wise, Ph.D.---Associate Dairyman
P. G. Miller, Ph.D.---Associate Dairyman
W. M. DuPre, B.S.---Assistant in Dairying

Entomology

Franklin Sherman, M.S.---Entomologist
O. L. Cartwright, M.S.---Associate Entomologist
J. N. Todd, M.S.---Assistant in Entomology

Home Economics

Ada M. Moser, M.S.---Home Economist in Charge
Mary E. Frayser, M.A.---Home Economist

Horticulture

A. M. Musser, B.S.---Horticulturist
J. B. Edmond, Ph.D.---Associate Horticulturist
*F. S. Andrews, M.S.---Associate Horticulturist

Farms

C. S. Patrick, B.S.---Head Farms Department

Poultry

C. L. Morgan, M.S.---Poultryman
R. C. Ringrose, Ph.D.---Assistant Poultry Husbandman

Publications

A. B. Bryan, B.Litt.---Agricultural Editor
W. C. Breazeale, B.S.---Bulletin Clerk

Veterinary

R. O. Feeley, D.V.S.---Veterinarian

*On leave 1938-1939.
**In cooperation with the United States Department of Agriculture.

Coast Station
Summerville, South Carolina

E. D. Kyzer, B.S.---Superintendent
**R. L. Jones, B.S.---Agent

Pee Dee Station
Florence, South Carolina

E. E. Hall, M.S.---Superintendent
**W. H. Jenkins, B.S.---Associate Agronomist
**W. M. Lunn, M.S.---Associate Agronomist
**F. F. Bondy, B.S.---Assistant Entomologist
**C. F. Rainwater, B.S.---Assistant Entomologist
**Norman Allen, M.S.---Assistant Entomologist
Frank Harrell---Research Assistant
**J. D. McCown---Agent

Sandhill Station
R. 5, Columbia, South Carolina

J. A. Riley, M.S.---Superintendent
L. E. Scott, M.S.---Assistant Horticulturist
R. W. Wallace, B.S.---Assistant Agronomist
**Nelson McKaig, M.S.---Associate Soil Technologist
**E. W. Faires, B.S.---Agent
**E. M. Roller, Ph.D.---Assistant Chemist
**W. A. Carns---Agent

Truck Station
Post Office Box 337
Charleston, South Carolina

W. C. Barnes, Ph.D.---Acting Superintendent
J. M. Jenkins, Jr., M.S.---Assistant Horticulturist
**W. J. Reid, Jr., B.S.---Assistant Entomologist
**C. O. Bare, M.A.---Assistant Entomologist

Edisto Station
Blackville, South Carolina

W. B. Rogers, B.S.---Superintendent
R. L. Smith, M.S.---Assistant Agronomist
C. J. Nusbaum, Ph.D.---Assistant Plant Pathologist
J. G. Watts, M.S.---Assistant Entomologist

Crop Pest Commission

G. M. Armstrong, Ph.D.---State Pathologist
Franklin Sherman, M.S.---State Entomologist
J. A. Berly, B.S.---Assistant State Entomologist
M. B. Stevenson, B.S.---Assistant State Pathologist

Fertilizer Inspection and Analysis

B. D. Cloaninger, B.S.---Head of Department
B. F. Robertson, B.S.---Chief Chemist, Toxicological Work
H. J. Webb, Ph.D.---Assistant Chief Chemist in Charge
J. T. Foy, B.S.---Chemist
C. R. Clark, B.S.---Assistant Chemist
E. E. Leslie, B.S.---Assistant Chemist
C. H. Hollis, B.S.---Assistant Chemist

*On leave 1938-1939.
**In cooperation with the United States Department of Agriculture.

LIVESTOCK SANITARY WORK STAFF

COLUMBIA, SOUTH CAROLINA

W. K. Lewis, V.S., M.D.V.---State Veterinarian and Director

R. A. Mays, B.Sc., D.V.M.---Assistant State Veterinarian
Jack Scott, D.V.M.---Assistant State Veterinarian
E. T. Fisher, D.V.M.---Assistant State Veterinarian
F. K. Peterson, D.V.M.---Assistant State Veterinarian
W. R. Chastain, D.V.M.---Assistant State Veterinarian
J. G. McKee, D.V.M.---Assistant State Veterinarian
H. B. Hood, V.M.D.---Assistant State Veterinarian
S. M. Witherspoon, B.Sc., D.V.M.---Assistant State Veterinarian
I. R. Cooper, D.V.M.---Assistant State Veterinarian
R. L. Willis, D.V.M.---Assistant State Veterinarian

N. J. Ayers, D.V.M.---Deputy State Veterinarian, Greer
W. A. Barnette, B.Sc., D.V.M.---Deputy State Veterinarian, Greenwood
M. R. Blackstock, D.V.S.---Deputy State Veterinarian, Spartanburg
T. L. Burriss, D.V.M.---Deputy State Veterinarian, Anderson
F. P. Caughman, Sr., B.Sc., V.M.D.---Deputy State Veterinarian, Columbia
J. T. Dickson, D.V.M.---Deputy State Veterinarian, Rock Hill
H. L. Frieze, D.V.M.---Deputy State Veterinarian, Gaffney
H. W. Graves, D.V.M.---Deputy State Veterinarian, Union
C. C. Harmon, B.Sc., D.V.M.---Deputy State Veterinarian, Columbia
Carlos Helms, D.V.M.---Deputy State Veterinarian, Darlington
L. J. Hogan, D.V.M.---Deputy State Veterinarian, Charleston
O'Neal Jacobs, D.V.M.---Deputy State Veterinarian, Laurens
T. J. Kinard, D.V.M.---Deputy State Veterinarian, Ninety Six
Don O. Kitchen, D.V.M.---Deputy State Veterinarian, Greenville
F. E. Kitchen, D.V.M.---Deputy State Veterinarian, Greenville
G. R. Kitchen, D.V.M.---Deputy State Veterinarian, Sumter
G. J. Lawhon, B.Sc., D.V.M.---Deputy State Veterinarian, Hartsville
J. S. Lide, D.V.M.---Deputy State Veterinarian, Newberry
W. D. McCormack, D.V.M.---Deputy State Veterinarian, Conway
B. C. McLean, V.M.D.---Deputy State Veterinarian, Aiken
W. K. Magill, B.Sc., D.V.M.---Deputy State Veterinarian, Chester
A. S. Moore, D.V.M.---Deputy State Veterinarian, Walterboro
J. H. Moore, D.V.M.---Deputy State Veterinarian, Charleston
J. H. Morse, V.M.D.---Deputy State Veterinarian, Sumter
B. K. McInnes, M.D., V.M.D.---Deputy State Veterinarian, Charleston
R. R. Salley, D.V.M.---Deputy State Veterinarian, Orangeburg
R. O. Suddath, B.S.A., V.M.D.---Deputy State Veterinarian, Walhalla
B. C. Talley, B.Sc., D.V.M.---Deputy State Veterinarian, Bennettsville
E. R. VanDeGrift, Jr., D.V.M.---Deputy State Veterinarian, Columbia

AGRICULTURAL EXTENSION STAFF

E. W. Sikes, Ph.D., LL.D.---*President*
D. W. Watkins, B.S., M.A.---*Director*
T. W. Morgan, B.S.---*Assistant to the Director*
C. M. Hall---*Chief Clerk and Accountant*

Agricultural Economics

O. M. Clark, B.S., M.S.
Extension Economist and Farm Management Specialist, Clemson
M. C. Rochester, B.S., M.S.---Farm Management Specialist, Clemson
*W. L. Abernathy, B.S.---Assistant Extension Economist, Clemson
*P. S. Williamon, B.S.---Assistant Farm Management Specialist, Clemson
D. C. Sturgis, B.S., M.S.---Assistant Extension Economist, Clemson
M. H. Sutherland, B.S.---Assistant Extension Economist, Clemson
P. B. Ezell, B.S.---Supervisor Test-Demonstration Farms, Newberry

Agricultural Engineering

C. V. Phagan, B.S.---Agricultural Engineer, Clemson
G. H. Stewart, B.S., M.S.---Assistant Agricultural Engineer, Clemson
E. C. Turner, B.S.---Soil Conservation Specialist, Clemson
M. C. McKenzie, B.S.---Assistant to the Agricultural Engineer, Clemson

Agronomy

**R. W. Hamilton, B.S.---Extension Agronomist in Charge
B. E. G. Prichard, B.S.---Assistant Extension Agronomist, Clemson
H. A. McGee---Tobacco Specialist, Florence

Animal Husbandry

J. R. Hawkins, B.S., M.S.---In Charge Livestock Extension, Columbia
A. L. DuRant, B.S., M.S.---Livestock Specialist, Florence

Boys' 4-H Club Work

I. D. Lewis, B.S., M.S.---State Boys' Club Agent, Clemson
*L. O. Clayton, B.S.---Assistant State Boys' Club Agent, Clemson
O. R. Smith, B.S.---Acting Assistant State Boys' Club Agent, Clemson

Dairying

C. G. Cushman, B.S.---Dairy Specialist in Charge, Clemson
T. F. Cooley, B.S.---Dairy Specialist, Clemson

Entomology and Plant Pathology

W. C. Nettles, B.S., M.S.
Extension Entomologist and Plant Pathologist, Clemson
E. S. Prevost---Specialist in Beekeeping, Clemson

Horticulture

E. H. Rawl, B.S., M.S.---Extension Horticulturist in Charge, Clemson
A. E. Schilletter, B.S.---Extension Horticulturist, Clemson

Marketing

G. E. Prince, B.S.---Chief Marketing Division, Columbia
T. A. Cole, B.S.---Agent in Marketing, Columbia
E. H. Talbert, B.S.---Specialist in Grading and Packing, Columbia

Poultry

P. H. Gooding, B.S., M.S.---Extension Poultryman, Clemson
J. W. Matthews, B.S.---Assistant Extension Poultryman, Clemson

Printing and Distribution of Publications

A. B. Bryan, B.S., B.Litt.---Agricultural Editor, Clemson
J. D. Wooten---Field Information Specialist, Clemson

Visual Instruction

T. W. Morgan, B.S.---In Charge of Division, Clemson
J. D. Brown, B.S.---Assistant in Visual Instruction, Clemson
L. W. Riley---Assistant in Visual Instruction, Clemson

*On leave.
**At present with the Agricultural Adjustment Administration, Columbia.

DISTRICT AGENTS

First District	*A. A. McKeown, B.S.	Spartanburg
Second District	J. T. Lazar, B.S.	Florence
Third District	A. H. Ward, B.S.	Aiken

COUNTY AGRICULTURAL AGENTS

County	*Name*	*Post Office*
Abbeville	Z. D. Robertson, A.B.	Abbeville
Aiken	H. A. Woodle, B.S.	Aiken
Allendale	W. H. Pressly, B.S.	Allendale
Anderson	E. P. Josey, B.S.	Anderson
Bamberg	W. H. Craven, B.S.	Bamberg
Barnwell	H. G. Boylston, B.S.	Barnwell
Beaufort	T. H. Seabrook, B.S.	Beaufort
Berkeley	J. H. Harvey, B.S.	Moncks Corner
Calhoun	Colin McLaurin, B.S.	St. Matthews
Charleston	C. W. Carraway, B.S.	Charleston
Cherokee	S. C. Stribling, B.S.	Gaffney
Chester	M. C. Crain, B.S.	Chester
Chesterfield	W. J. Tiller, B.S.	Chesterfield
Clarendon	F. M. Rast, B.S., M.S.	Manning
Colleton	L. W. Alford, B.S.	Walterboro
Darlington	J. M. Napier, B.S., M.S.	Darlington
Dillon	S. W. Epps, B.S.	Dillon
Dorchester	G. C. Meares, B.S.	St. George
Edgefield	J. F. Jones, B.S.	Edgefield
Fairfield	R. H. Lemmon, B.S.	Winnsboro
Florence	J. W. McLendon, B.S.	Florence
Georgetown	M. M. McCord, B.S.	Georgetown
Greenville	W. R. Gray, B.S.	Greenville
Greenwood	R. D. Steer, B.S.	Greenwood
Hampton	J. C. Anthony, B.S.	Hampton
Horry	V. M. Johnston, B.S.	Conway
Jasper	J. P. Graham, B.S.	Ridgeland
Kershaw	W. C. McCarley, B.S.	Camden
Lancaster	F. W. Cannon, B.S.	Lancaster
Laurens	C. B. Cannon, B.S.	Laurens
Lee	**T. M. Cathcart, B.S.	Bishopville
Lee	J. C. McComb, B.S., Acting	Bishopville
Lexington	R. R. Mellette, B.S.	Lexington
McCormick	R. D. Suber, B.S.	McCormick
Marion	W. R. Wells, Jr., B.S.	Marion
Marlboro	W. D. Wood, B.S.	Bennettsville
Newberry	**P. B. Ezell, B.S.	Newberry
Newberry	J. L. King, B.S., Acting	Newberry
Oconee	G. H. Griffin, B.S.	Walhalla
Orangeburg	L. B. Massey, B.S.	Orangeburg
Pickens	T. A. Bowen, B.S.	Pickens
Richland	D. R. Hopkins, B.S.	Columbia
Saluda	Claude Rothell, B.S.	Saluda
Spartanburg	W. H. Stallworth, B.S.	Spartanburg
Sumter	J. M. Eleazer, B.S.	Sumter
Union	T. B. Lee, B.S.	Union
Williamsburg	R. A. Jackson, B.S.	Kingstree
York	L. W. Johnson, B.S.	Rock Hill

*Deceased.
**On leave.

ASSISTANT COUNTY AGRICULTURAL AGENTS

County	*Name*	*Post Office*
Aiken	D. A. Shelley, B.S.	Aiken
Anderson	M. A. Bouknight, B.S.	Anderson
Barnwell	H. A. Bowers, B.S.	Barnwell
Charleston	J. E. Youngblood, B.S.	Charleston
Chester	D. H. Caughman, B.S.	Chester
Chesterfield	J. C. Willis, B.S.	Chesterfield
Colleton	D. Richardson, B.S.	Walterboro
Darlington	J. W. Talbert, B.S.	Darlington
Florence	E. B. Baskin, B.S.	Florence
Greenville	J. D. Miller, B.S.	Greenville
Greenwood	T. M. Clyburn, B.S.	Greenwood
Horry	J. M. Lewis, B.S.	Conway
Laurens	T. A. Stallworth, B.S.	Laurens
Newberry	G. J. Mobley, B.S.	Newberry
Orangeburg	E. C. Abrams, B.S.	Orangeburg
Pickens-Oconee	J. R. Wood, B.S.	Pickens
Spartanburg	W. J. Martin, B.S.	Spartanburg
Sumter	T. O. Bowen, B.S.	Sumter
Williamsburg	D. K. Josey, B.S.	Kingstree
York	B. J. Funderburk, B.S.	Rock Hill

NEGRO AGRICULTURAL AGENTS

H. E. Daniels, District Agent, State College, Orangeburg, S. C.

County	*Name*	*Post Office*
Aiken	George T. Dowdy	Aiken
Anderson	J. A. Gresham	Anderson
Bamberg	J. D. Marshall	Bamberg
Beaufort	Benjamin Barnwell	Beaufort
Chester	Waymon Johnson	Chester
Clarendon	Wm. Thompson	Manning
Darlington	S. C. Disher	Darlington
Fairfield	D. G. Belton, Jr.	Winnsboro
Florence	H. S. Person	Florence
Greenville	Robt. W. Anderson	Greenville
Greenwood	L. V. Walker	Greenwood
Orangeburg	G. W. Daniels	Orangeburg
Richland	J. E. Dickson	Columbia
Spartanburg	W. C. Bunch	Spartanburg
Sumter	Jason Maloney	Sumter
Union	E. N. Williams	Union
Williamsburg	Van Buren Thomas	Kingstree
York	Booker T. Miller	Rock Hill

Note: All negro agents have B.S. Degrees from State College at Orangeburg, or the equivalent from other institutions.

HOME DEMONSTRATION EXTENSION DEPARTMENT

The United States Department of Agriculture, Clemson College and Winthrop College Working in Cooperation

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LONNY I. LANDRUM, B.S.—State Home Demonstration Agent, Rock Hill
HARRIETTE B. LAYTON—Assistant Home Demonstration Agent, Rock Hill
BESSIE HARPER, B.A.—District Agent, Aiken
THEODOSIA DARGAN PLOWDEN—District Agent, Route 3, Sumter
JUANITA NEELY, B.A., M.S.—District Agent, Rock Hill
DORA DEE WALKER, B.A.—Production and Conservation Specialist, Appleton
HARRIET F. JOHNSON, B.A., B.S., M.A.—State Girl's Club Agent, Rock Hill
JANE KETCHEN, B.S.—Marketing Specialist, Rock Hill
ELIZABETH WATSON, B.S.—Clothing Specialist, Rock Hill
MYRA REAGAN, B.A., M.S.—Extension Nutritionist, Rock Hill
ELEANOR CARSON, B.A.—Poultry Specialist, Rock Hill
PORTIA SEABROOK, B.A.—Home Management Specialist, Rock Hill

COUNTY HOME DEMONSTRATION AGENTS

County	*Name*	*Post Office*
Abbeville	Elizabeth Herbert, A.B.	Abbeville
Aiken	Ann Elizabeth Monroe, B.S.	Aiken
Allendale	Mamie Sue Hicks, B.S.	Allendale
Anderson	Ella Burton, B.S.	Anderson
Bamberg	Marie Lambert, B.S.	Bamberg
Barnwell	Elizabeth McNab, A.B.	Barnwell
Beaufort	Mary Ellen Eaves, A.B., B.S.	Beaufort
Berkeley	Laura Connor, B.S.	Moncks Corner
Calhoun	Lula Chriesman	St. Matthews
Charleston	Caroline S. Alston	Charleston
Cherokee	Eloise Johnson, B.S.	Gaffney
Chester	John'gy Richards, B.S.	Chester
Chesterfield	Kerby Tyler	Chesterfield
Clarendon	Carrie Carson, B.S.	Manning
Colleton	Isobel Patterson, B.S.	Walterboro
Darlington	Emmie J. Evans	Darlington
Dillon	Etta Sue Sellers, B.A.	Dillon
Dorchester	Ophelia Barker, B.S.	St. George
Edgefield	Laura Mellette, B.S.	Edgefield
Fairfield	Susan Pender, B.S.	Winnsboro
Florence	Anne Moss Moore, B.S.	Florence
Florence	Nancy Hinson, B.S. (Asst. Agent)	Lake City
Georgetown	Vela Smith, B.S.	Georgetown
Greenville	Julia W. Stebbins	Greenville
Greenville	Lila Moore, B.S.	Greenville
Greenwood	Carolyn Avinger, B.S.	Greenwood
Hampton	Izora Miley	Hampton
Horry	Margaret Cloud	Conway

Jasper	Gertrude Lanham, B.S.	Ridgeland
Kershaw	Margaret Fewell, B.A.	Camden
Lancaster	Jennie Robinson, B.S.	Lancaster
Laurens	Jennie E. Coleman	Laurens
Lee	Sallie Pearce	Bishopville
Lexington	Mattie Lee Cooley, A.B., B.S.	Lexington
McCormick	Matilda Bell, B.S.	McCormick
Marion	Hazel Smith, B.S.	Marion
Marlboro	Janie McDill, B.A., B.S.	Bennettsville
Newberry	Ethel Counts, B.A.	Newberry
Oconee	Mary C. Haynie, B.A.	Walhalla
Orangeburg	Louise Fleming	Orangeburg
Orangeburg	Huldah Pearson, B.S. (Asst. Agent)	Orangeburg
Pickens	Sarah G. Cureton, B.S.	Pickens
Richland	Winnie Belle Holden, B.A.	Columbia
Saluda	Pearle Calvert	Saluda
Spartanburg	Kate M. Hooper	Spartanburg
Sumter	Jean Reid, B.S.	Sumter
Union	Mahala J. Smith	Union
Williamsburg	Elizabeth D. Boykin, A.B.	Kingstree
York	Margaret Martin, B.S.	Rock Hill

NEGRO HOME DEMONSTRATION AGENTS

Marion B. Paul, State Supervisor Negro Home Demonstration Work, State College, Orangeburg, S. C.

County	*Negro Agents' Names*	*Address*
Aiken	Matred McKissick	Aiken
Allendale	Rosa Reed	Allendale
Allendale	Susie Bivens (Asst. Agent)	Allendale
Beaufort	Willie Mabel Price	Frogmore
Beaufort	Gladys Hurley (Asst. Agent)	Frogmore
Charleston	Albertha DeVeaux	Charleston
Dorchester	Mattie E. Overstreet	St. George
Florence	Lillian Brown	Florence
Georgetown	Rosa G. Gadsden	Georgetown
Greenville	Delphenia Wilkerson	Greenville
Marlboro	Minnie Gandy	Clio
Newberry	Laura Manney	Newberry
Orangeburg	Marie B. Blakemon	Orangeburg
Richland	Frances Thomas	Columbia
Spartanburg	Ethel Taggart	Spartanburg
Sumter	Janie Rucker	Sumter

Note: All negro Home Demonstration Agents have had college training in home economics.

PART II—INFORMATION

REQUIREMENTS FOR ADMISSION

General. All applicants for admission to Clemson College must be at least sixteen years of age and at the time of entrance must be free from contagious or infectious disease. A certificate of good moral character and honorable discharge from the last school attended is required.

Application Blanks. Blanks to be used in applying for admission may be obtained from the Registrar, Clemson College, Clemson, South Carolina.

Admission by Certificate. Graduates from accredited high schools who have completed at least sixteen standard high-school units, including three units in English, two and one-half in mathematics, and one in history, are admitted to the freshman class without examination. A complete statement of the applicant's high-school record must be submitted by the high-school principal on the regular application blank. If he has attended another college, a transcript of that record and a statement of honorable discharge must be submitted.

Admission by Examination. Students who do not meet the requirements given above may be admitted to the college by passing the entrance examinations. For the dates of these examinations see the college calendar.

Admission by Certificate and Examination. Applicants who are not graduates of accredited high schools, but who can give acceptable documentary evidence of having completed the equivalent of a high-school course under formal instruction, will be required to pass examinations on English, mathematics, history, and one other subject selected by the Registrar. These examinations are held at the same time as the regular entrance examinations.

Admission to Advanced Standing. Work that has been taken in other colleges will be credited for an equivalent amount of work so far as it applies to any course offered in the College. The applicant must present: (a) a letter of honorable dismissal from the institution last attended, and (b) an official transcript of his record, including entrance credits. College credits given by transfer are provisional and may be cancelled at any time if the student's work is unsatisfactory. A student coming from another institution must spend at least one regular session in the College before he is eligible to apply for a degree.

Matriculation. Students upon arrival at the College at the opening of the session must report at once to the Registrar's Office. New students will be directed in the procedure necessary to complete their enrollment. A student's matriculation with the College is equivalent to his pledge to conform to the rules of the institution. Any admission gained or matriculation made irregularly is subject to cancellation.

EXPENSES

Settlement of College Fees. The Treasurer of the College is the financial officer and all transactions relating to payments must be conducted through him. The first quarterly payment must be made before a student can be assigned to a room in barracks or permitted to begin work. Remittances should be made in cash, money order, cashier's check, or by local check *made payable to S. W. Evans, Treasurer. All remittances made by mail must be addressed to: The Treasurer, Clemson College, Clemson, S. C.* A personal check which is given in payment of dues and is returned by the bank unpaid automatically cancels a student's reservation and automatically drops from class rolls a student who is in school.

Expenses: Considering the standard of living and quality of instruction, Clemson is one of the most economical colleges in the country. Based on conditions in 1938-1939 the cost to South Carolina students for board, laundry, room, hospital, other fees,

and tuition (but not uniform) is $314.30 for the session. The legal residence of the parent, or guardian, determines the tuition status of the student. Students from other states pay $155.00 for out-of-state tuition. This is $90.00 in addition to the $65.00 paid by South Carolina students. The Treasurer is required to collect in full the amounts due on dates specified. The expenses are due in four installments as indicated below.

Uniform: The total cost of complete new uniform required for Freshmen, or new students, for 1938-1939 was $73.32. Students in upper classes use serviceable uniform articles on hand. The average cost of uniform for upperclassmen for the 1938-1939 session was $16.94 for Sophomores, $37.18 for Juniors, and $14.28 for Seniors.

The payments at entrance to cover board, laundry, room, hospital, other fees, tuition, *and uniform* for first quarter of session 1938-1939 were as follows:

First Quarter	South Carolina Students	Out-of-State Students
New Students	$158.87	$181.37
Sophomores	102.49	124.99
Juniors	122.73	145.23
Seniors	99.83	122.33

Subsequent payments for students in all classes were due according to the following schedule:

Payment	Date Due	South Carolina Students	Out-of-State Students
Second Quarter	November 24, 1938	$76.25	$98.75
Third Quarter	February 6, 1939	76.25	98.75
Fourth Quarter	April 7, 1939	76.25	98.75

Any uniform allowance made to R. O. T. C. students by the Federal Government will be credited to the individual's dues for the Fourth Quarter, when the full amount of the com-

mutation is received by the College. All other R. O. T. C. payments are made by the Government directly to the student.

Note: The expenses given above are for regular cadets who live in the dormitories. Under certain regulations, and with the approval of the President, a student may become a Day Cadet or Day Student. A Day Cadet is a member of the corps who rooms and boards outside of barracks. A Day Student is a member of the student body who is not a member of the cadet corps.

Refunds: Refunds will be made under the following rules:

1. A refund of *all* moneys, except matriculation fee of $3.00 and $1.00 per day for board, etc., will be made for a student who withdraws from College within ten days of the date of his matriculation, with the provision that the refund for uniform cannot be guaranteed for items tailored to individual measure.

2. A refund of moneys collected for board, laundry, and barracks heat, light, and water at the rates charged will be made for a student who withdraws subsequent to the first ten days after matriculation. This also applies to interruptions exceeding fifteen days, not including holiday periods.

3. A refund of moneys collected for uniform will be made for a student who withdraws from College on articles issued to him and returned unused, except garments tailored to measure; and on articles for which he has paid but which have not been issued to him, except articles tailored to measure which are in process of manufacture.

4. A refund for a student will be made to his parents, or guardian, except that for uniform cancellation approved by the Commandant, which refund will be made direct to the student.

5. The College will not be liable for articles lost or stolen in the barracks.

6. The College will not be liable for lost or damaged laundry unless reported within two days after the date upon which the laundry was due to be delivered, and then not more than the actual depreciated value of such articles as have been lost or damaged.

Student Banking Accounts. For the convenience of students the College operates a banking department in the Treasurer's office where money can be deposited and withdrawn as the occasion may demand. This service is purely local. Students are urged to deposit their money in the bank and not to keep it in their rooms.

Books and Supplies. The L. C. Martin Drug Co., Inc., conducts a store near the campus and maintains a book and supply store where students may purchase textbooks, drawing instruments, and other supplies. A complete list of the textbooks used in each course, together with their prices will be furnished on application to the book store.

Each student will be required to own his textbooks and necessary equipment. All students shall submit their textbooks and other equipment for inspection at such times as are ordered.

Optional Expenses. It is not possible to give an estimate of a student's expenditures for such amusements as dancing, moving pictures, etc. This depends largely upon the disposition of the young man. The College endeavors to reduce to a minimum the temptation to spend money needlessly, but the authorities cannot be responsible for a student's private expenditures. This must be a matter between him and his parents.

Transcripts. Transcripts of scholastic records are not issued to students who have not been graduated. However, a transcript will be sent to any institution or other recognized rating agency upon request. One transcript is furnished free; additional copies are issued for one dollar each. Remittances for transcripts should be made payable to The Treasurer, Clemson

College, but should accompany transcript requests and should be mailed to The Registrar.

Student Aids. There are few opportunities for students to earn money at Clemson by working in their spare time. In an agricultural and mechanical college most of the student's time when he is not in the classroom is occupied in laboratories, shops, and field work. About forty young men secure positions as waiters in the mess hall, for which service they are paid at the rate of about eight dollars a month. These positions are filled by the Mess Officer, to whom all correspondence should be addressed. In addition to this help, membership in the Reserve Officers Training Corps entitles freshmen and sophomores to a small commutation on uniforms. Juniors and seniors receive also a ration commutation.

LOAN FUNDS

John Bryce Baskin Fund. Interest on $2,000.00 given by Cecil L. Reid, of the Class of 1902, as an appreciation of the aid given him by Mr. Baskin. This fund is "available to any resident of South Carolina but if all other things are equal, preference is to be given the boy or boys from York or Newberry Counties, South Carolina."

The William Wilson Finley Loan Fund. The sum of $1,000 has been deposited with the College to be used as a loan fund to students living in counties traversed by the Southern Railway or the Blue Ridge Railway.

The George Cherry Foundation. Mrs. Mary Cherry Doyle has donated $1,000 to aid worthy and needy students from Oconee County and that part of Anderson County including Pendleton. This fund is not available for first-year students.

The U. D. C. Loan Fund. The John C. Calhoun Chapter of the U. D. C. has created a fund of $500.00 to be loaned to lineal

descendants of the Confederate veterans. This fund is limited to juniors and seniors.

Clemson Student Loan Association Fund. In the spring of 1930 President Sikes invited a number of interested teachers, officers, alumni, and friends of Clemson College to meet for the purpose of raising funds to be loaned to worthy Clemson students who were already in college. Many responded. Officers were elected; a constitution and by-laws adopted. Twelve hundred dollars has already been realized through gifts and annual membership dues, which are five dollars per year. There are seventy-six members. Anyone desiring to assist young men in this way should communicate with Mr. W. K. Livingston, Greenville, S. C., who is president of the organization, or Mr. J. C. Littlejohn, Business Manager, Clemson, S. C.

The College is in need of funds to lend worthy students. Donations for this or other purposes may be made to the Board of Trustees of Clemson College, or to the Trustees of the Clemson Alumni Foundation. The President of the College or the Secretary of the boards named above will be glad to communicate with any person who is interested in establishing such a fund.

ANDERSON FELLOWSHIP

The Alexander P. Anderson and the Lydia Anderson Fellowship. Mr. and Mrs. Anderson have given to the Clemson Agricultural College the sum of $10,000 for the purpose of establishing a fellowship fund. The income from this trust fund is to be used for the purpose of awarding a scholarship or fellowship to one or more Clemson graduates for advanced work in biological sciences including bacteriology and entomology. The scholarship is to be awarded annually by the faculty of the Clemson Agricultural College to an outstanding student. The name of the beneficiary is reported to the Board of Trustees, and an accounting of the funds by the Treasurer of the College is made annually.

SEARS ROEBUCK SCHOLARSHIPS

The Sears Roebuck Agricultural Foundation has made available for freshman agricultural scholarships at Clemson the sum of $2500 for the 1937-1938 session and $2250 for the 1938-1939 session of the college.

BUILDINGS AND GROUNDS

Buildings. The Administration Building houses the offices of the President, the Registrar, the Commandant, the Treasurer, the Business Manager, the Professor of Military Science and Tactics, and the Dean of the School of General Science. This building also has over twenty classrooms. At the north end of the building is Memorial Hall, the College Auditorium, with a seating capacity of about eighteen hundred.

The Library Building houses the main library of the college and the experiment station library. There are in the library approximately twenty-three thousand books and twenty thousand bound volumes of periodicals, experiment station bulletins, and government publications. The departmental libraries also contain a number of volumes pertaining especially to the work of the department concerned.

The instructional work of the institution is maintained largely in the departmental buildings. The Schools of Agriculture, Engineering, Textiles, Vocational Education, and Chemistry have individual buildings especially designed for their purposes. The School of General Science is located in the Administration Building. Certain laboratory work is conducted at the greenhouses, live stock barns, poultry plant, veterinary hospital, and other buildings on the college farm.

The cadet barracks consist of seven large brick buildings—four of which were constructed during 1936. All barracks are steam-heated, electrically-lighted, and supplied with hot and cold water. The six hundred and fifty rooms in the barracks are

furnished with single-width iron cots and other necessary equipment.

The Hospital, located about a quarter of a mile from the barracks, is a wooden building, especially designed for the purpose. The equipment includes a Victor X-ray machine, a new Burdick ultra-violet ray machine, and a sorensen machine of the latest design for ear, eye, nose, and throat treatments.

The Y. M. C. A. building is a four-story structure equipped with club rooms, lounge rooms, game rooms, and has in addition, thirty rooms available for permanent roomers, guests, and transients. Having an auditorium, gymnasium, and swimming pool, the Y. M. C. A. building is admirably fitted to serve as the center of social activities and voluntary religious work.

The Physical Education Building at present consists of the Field House and the Gymnasium. Construction of the Alumni section which is to be a part of the Physical Education plant, has been begun.

The Laundry, which is operated exclusively for the students, is a brick building, equipped with improved modern machinery.

The Clemson College Hotel, a frame building, is situated on a hill overlooking the campus. This building and numerous brick and frame residences furnish homes for most of the college teachers and officers.

Fort Hill, the former home of John C. Calhoun, is located on the Clemson campus. In accordance with the provisions of Mr. Clemson's will, this residence has been made a shrine in honor of Mr. Calhoun. Several pieces of furniture and other interesting relics, formerly the property of Mr. Calhoun, are carefully preserved in this home, where they may be seen by visitors to the college.

Grounds. The college grounds comprise about 1,544 acres, including the campus, the farm, and the Experiment Station grounds. The two-hundred acre campus is laid out in walks, drives, and lawns, and is shaded by a beautiful grove of native forest trees.

LIVING CONDITIONS

At Clemson students live in barracks under military discipline. A student must at all times be present or accounted for. The barracks or dormitories are divided into "halls" for military purposes, a unit being assigned to a hall under the supervision of a cadet officer.

Cadet officers remain on duty both day and night at the guard room, in which is located a long-distance telephone with twenty-four hour service.

Each student room is equipped with necessary furniture. The beds are single width. Bed linen, bed covers, pillows, and towels must be furnished by the students.

All students are required to provide themselves with two mattress covers and two clothes bags. These are regulation articles and can be secured only at the College. One set will likely serve for use during the four years.

The dining hall, or mess hall, is located in Barracks No. 1. It is well equipped and is under the supervision of the mess officer. The kitchen and cold storage plant are among the best in the South. All students living in the barracks eat in the dining hall.

RESERVE OFFICERS' TRAINING CORPS

Under the provisions of the National Defense Act, the War Department has established at Clemson College an infantry unit of the Reserve Officers' Training Corps. All students of

the College, unless excused by the President, are required to take a minimum of three hours per week of military training. To be admitted to membership in the corps and to receive the privileges connected therewith, juniors and seniors must be recommended by the President and the Professor of Military Science and Tactics. All members at the completion of the junior class will be required to attend a summer camp, where their expenses will be paid by the Federal Government. After graduation the student may upon the recommendation of his instructors receive a commission in the Officers' Reserve Corps.

STUDENT HEALTH SERVICE

The Surgeon, who has complete charge of the hospital, is one of the regular officers of the College, and his special duty is to look after the health of the students.

At a specified time every day, students who desire may consult the Surgeon, and those who are admitted to the hospital are cared for by experienced nurses in the college hospital. In case of necessity students are allowed to consult the Surgeon at any time, or to send for him in an emergency.

The Surgeon cannot undertake to notify parents every time a student reports to the hospital for medicine, or for rest on account of some slight complaint. However, they may rest assured that they will be notified at once of sickness of any consequence.

The medical fee paid by each student is intended to cover all ordinary cases of sickness and their treatment. It is not intended to cover fees of doctors or specialists called into consultation, for performing operations, for special nurses, or for any medical or surgical attentions performed away from the College; and the College does not assume any responsibility for accidents that happen away from the College. Such expenses must be borne by the parents. The right of the College Surgeon, with the approval of the President of the College, to incur in

behalf of any student under his care any of these extra services is hereby expressly reserved.

Intramural athletics are encouraged and sponsored by the physical education department and the Y. M. C. A. The various companies under the military organization have teams in such sports as volley ball, basketball, baseball, and soccer. These competitive games have drawn much interest and enthusiasm. At Clemson about two-thirds of the student body participate at one time or another in some intramural sport. Participation is voluntary, but the majority of the students take advantage of the opportunity for wholesome recreation and physical development.

RELIGIOUS INFLUENCES

Clemson cooperates with the various churches and the Young Men's Christian Association in the religious training of its students. Denominations not having churches in the community have facilities provided in the Y. M. C. A. building for their services.

Five denominations: Baptist, Episcopal, Methodist, Presbyterian, and Roman Catholic, have erected churches in the community. Students are required to attend the Sunday morning services. Arrangements are made for services for students of other denominations. Sunday schools and young people's church societies are maintained by the local churches. Attendance upon the services of these organizations is voluntary.

Courses in Religion, which are credited as free electives, are offered. This work is not financed by the College. For information regarding these courses see the description of courses.

HISTORICAL STATEMENT

In 1889, the General Assembly of South Carolina accepted the bequest of Thomas G. Clemson, which set aside the

bulk of the Clemson estate for the founding of a scientific and technical college. The institution was also established under the Morrill Land-Grant Act passed by the National Congress in 1862. Clemson College, therefore, is the Agricultural and Mechanical College of South Carolina and is a member of the national system of Land-Grant Colleges and Universities.

The nature of the institution is outlined in Mr. Clemson's will and its acceptance by the legislature.

The will in part reads:

"Feeling a great sympathy for the farmers of this State, and the difficulties with which they have to contend in their efforts to establish the business of agriculture upon a proper basis, and believing that there can be no permanent improvement in agriculture without a knowledge of those sciences which pertain particularly thereto, I have determined to devote the bulk of my property to the establishment of an Agricultural College upon the Fort Hill Place. My purpose is to establish an Agricultural College which will afford useful information to the farmers and mechanics; therefore it should afford thorough instruction in agriculture and the natural sciences connected therewith; it should combine, if practicable, physical with intellectual education, and should be a high seminary of learning in which the graduate of the common schools can commence, pursue and finish a course of studies terminating in thorough theoretic and practical instruction in those sciences and arts which bear directly upon agriculture. * * * * but to always bear in mind that the benefits herein sought to be bestowed are intended to benefit agriculture and mechanical industries. * * * * I trust I do not exaggerate the importance of such an institution for developing the material resources of the State, by affording its youth the advantages of scientific culture.

"The desire to establish such a school or college as I have provided for in my said last will and testament, has existed

with me for many years past, and many years ago I determined to devote the bulk of my property to the establishment of an Agricultural School or College. To accomplish this purpose is now the one great desire of my life."

This will gave all that part of the Fort Hill Estate inherited by Mrs. Clemson from her mother and the bulk of Mrs. Clemson's other real and personal property. The latter amounted to a sum, which, considering the purchasing power at the time, probably has been only a few times exceeded in a public benefaction in South Carolina.

A Board of Trustees of seven members was provided for: R. W. Simpson, D. K. Norris, M. L. Donaldson, R. E. Bowen, B. R. Tillman, J. E. Wannamaker, and J. E. Bradley, who with those chosen by the General Assembly should constitute a governing board in case the State accepted the bequest; but, who, in case the State declined the bequest, should alone constitute a governing board for a private institution.

These seven trustees, along with other friends of the movement, and the agricultural groups in the State developed and organized a public opinion favorable to the plan.

In November, 1889, the General Assembly of South Carolina accepted the terms of the will, and, following the decision of the United States Supreme Court to uphold the will, the State of South Carolina and the full Board of Trustees proceeded to convert the dream of Thomas G. Clemson into the reality of Clemson College.

The College was formally opened in July, 1893, with an enrollment of 446 students. The first graduating exercises were held in December, 1896, with a graduating class numbering thirty-six—fifteen in the agricultural courses and twenty-one in the engineering courses.

	1937-1938	Total
ENROLLMENT—REGULAR SESSION	1,912	16,539
Graduates by Courses:		
Agriculture	51	1,796
Agricultural Engineering	10	40
Architecture	6	138
Civil Engineering	8	354
Electrical Engineering	18	451
Mechanical Engineering	13	207
Mechanical Electrical Engineering	0	528
Education	2	4
Engineering Industrial Education	0	68
Chemistry	7	155
General Science	38	262
Textile Engineering	31	401
Textile Chemistry	11	87
Textile Industrial Education	3	79
Weaving and Designing	5	26
Bachelor of Science	0	1
Vocational Agricultural Education	38	110
Industrial Education	6	29
Chemical Engineering	14	14
	261	4,750

LOCATION

The College is located on the Fort Hill homestead of John C. Calhoun, in the picturesque foothills of the Blue Ridge. It has an elevation of 800 feet above sea level and commands an excellent view of the mountains to the north and west, some of which attain an altitude of nearly five thousand feet.

The College is located at Clemson, S. C., which is one mile from Calhoun, a town on the main line of the Southern Railway, and four miles from Pendleton, on the Blue Ridge Railway. State Highways number 13 and 24 pass through Clemson, and daily bus service at regular intervals is available.

CLEMSON COLLEGE ALUMNI CORPORATION

The Alumni Corporation has established a permanent office on the campus. The office is in charge of a secretary, who is elected by the Board of Directors of the Corporation. The

Clemson office is a clearing house for all matters concerning the alumni. In addition to keeping accurate records of addresses and information concerning alumni, the Corporation has established at the Clemson headquarters a bureau for repairing Clemson class rings, and for securing duplicates of these rings.

The Corporation holds its regular annual meeting at the College on Monday of Commencement. At this meeting all officers are elected. The Secretary is elected by the Board of Directors which is in turn responsible to the general Corporation for the conduct of its business. The purpose of the Alumni Corporation is to serve the College and the alumni in every possible way. All correspondence regarding its affairs is conducted through the Clemson office.

Graduates and former students are requested to keep the Alumni Office informed as to changes of address, occupation, and other matters that will be of interest to those in charge of Alumni Records and mailing lists.

PART III—STUDENT LIFE AND ACTIVITIES

CADET MILITARY ORGANIZATION

Clemson College is operated as a military school,—not for the purpose of making soldiers, but in order that the students may learn the importance of loyalty and obedience to authority, and acquire the habit of being courteous, systematic, and punctual.

The military system places every student on an equal standing. All cadets wear the uniform, live under the same conditions, and are subject to the same privileges and restraints.

The military system does not in any way interfere with the regular college work, but on the other hand enables it to maintain a higher level of efficiency. Military training is a feature that gives to Clemson's graduates an advantage which is an important factor in their future progress and success.

CLUBS AND SOCIETIES

Honor Fraternities. Honor scholarship organizations, including Tau Beta Pi, Sigma Tau Epsilon, Phi Psi, Alpha Zeta, Alpha Tau Alpha, and Iota Lambda Sigma, give recognition to superior work done by Engineering, General Science, Textile, Agricultural, Agricultural Education, and Industrial Education students respectively.

The military activities of the cadet officers of the corps are recognized in membership in the Society of Scabbard and Blade, a national military honor fraternity.

The Blue Key, a national fraternity based upon leadership, has a chapter at Clemson.

Student Clubs. Students majoring in various courses of instruction have organized clubs. Among such clubs are in-

cluded the Agricultural Economics Club, the Dairy Club, the Horticultural Club, the Minaret Club (an architectural organization), and the Athanor (a chemical society).

Two literary societies, the Calhoun and the Palmetto, furnish a valuable supplement to scholastic work.

Engineering Societies. Outstanding students majoring in engineering courses are selected for membership in the Student Chapter of the American Institute of Electrical Engineers, American Society of Mechanical Engineers, and the American Society of Civil Engineers.

THE YOUNG MEN'S CHRISTIAN ASSOCIATION

The Y. M. C. A. at Clemson is a composite of a Student Y. M. C. A., a City Y. M. C. A., a Community Building, and a Student Union. Hundreds of basketball and volley ball games are participated in by students, faculty, and campus children. Approximately a hundred social functions sponsored by the Y. M. C. A., or with the Y. M. C. A. cooperating, are held in the building during the year. Evening Watch Prayer groups and Bible discussion groups meet regularly on each company hall. More than half of the students take part in these meetings, with approximately forty faculty men assisting in leadership.

The Young Men's Christian Association has supervision of voluntary religious activities of the students and endeavors to contribute to the religious, social, and physical life of the college community.

The Sunday night union services held at the Y. M. C. A. are attended by approximately four hundred each Sunday night. It is here that the Y. M. C. A. presents visiting student groups as well as speakers, ministers, and other religious leaders.

ATHLETICS

It is the policy of the College to sanction and encourage athletics so long as participation does not interfere with studies and other duties. Football, baseball, basketball and track are the most popular sports. The College is a member of the Southern Conference and of the South Carolina Intercollegiate Athletic Association.

Intercollegiate Athletics. For the regulation of intercollegiate athletics, the faculty has adopted the following rules:

1. At the end of each grading period, the faculty athletic committee will canvass the records of athletes; and if any are found to be so deficient as to endanger their scholastic standing, they will be withdrawn from the squad.

2. In order to participate in intercollegiate contests, each athletic team may be allowed a maximum absence of ten days during the session (Saturday afternoon, Sunday and holidays not to be included). No one contestant or representative shall be allowed to leave the campus for more than twenty days during the session, except at the discretion of the faculty athletic committee.

3. No member of an athletic team shall be eligible for a managerial position in any other branch of sport.

4. No team shall be allowed to leave the college grounds to participate in any match game unless accompanied by an authorized coach or other member of the faculty, who shall be responsible to the college for the conduct of the players while away.

5. No student shall be eligible to participate in an intercollegiate contest who is away from the College without proper authority or without having complied with all the rules or orders issued by the President regarding such matters.

6. It shall be the duty of the faculty athletic committee to see that the foregoing rules and regulations are strictly enforced.

MEDALS AND HONORS

Trustees' Medal. The Board of Trustees has provided for a gold medal to be awarded annually at Commencement to the best speaker among the representatives of the literary societies. The medal was won in 1938 by Cadet J. J. Lever, Cayce, South Carolina.

Norris Medal. The following is from the will of Hon. D. K. Norris, a life trustee of Clemson, who died in 1905:

"I give $500 face value, Norris Cotton Mill stock . . . . on condition the dividend thereon shall be applied annually to the purchase of a gold medal, to be known as the 'Norris Medal', to be awarded to the student of Clemson meriting the same at graduation, under such rules and conditions as may be prescribed by the said Board of Trustees, and which medal shall have engraved on it 'Honor habet onus' (Honor brings responsibility)."

In 1938 the medal was awarded to Cadet E. C. Ray, Andrews, South Carolina.

R. W. Simpson Medal. A medal designated as the "R .W. Simpson Medal" is awarded annually to the best drilled cadet in the freshman, sophomore, or junior class. In 1938 the medal was awarded to Cadet C. E. Littlejohn, Raleigh, North Carolina.

Arnold R. Boyd English Honor Key. Arnold R. Boyd, '14, now a lawyer in New York, donates this Honor Key annually to the student in the graduating class who makes the highest average in English during his college course. In 1938 this key was awarded to Cadet P. K. Switzer, Union, South Carolina.

Architect's Medal. The South Carolina Chapter of the American Institute of Architects each year awards a medal to the outstanding junior or senior in Architecture. In 1938 the medal was awarded to Cadet J. W. Linley, Jr., Anderson, South Carolina.

Farmers' Certificate of Merit. Beginning with the session of 1914-1915 certificates of merit have at times been awarded to two farmers in South Carolina who have rendered distinguished service in the agricultural development of the State.

National Association of Cotton Manufacturers Medal. For several years this medal has been awarded to the outstanding graduate in Textile Engineering. In 1938 the medal was won by Cadet Harry Geisberg, Anderson, South Carolina.

PART IV—ORGANIZATION AND GOVERNMENT

ADMINISTRATIVE ORGANIZATION

Board of Trustees. The government of the College is vested in a Board of thirteen members, six of whom are elected by the Legislature, and seven life and self-perpetuating under the Clemson will. The function of this Board is legislative and not executive. The Board determines the general policy of the College, makes the laws for its government, and directs the expenditure of its funds.

The President is the chief executive and administrative officer of the Board of Trustees. He is the head of the College and is responsible for its satisfactory working and success.

The College is divided into schools of Agriculture, Chemistry, Engineering, General Science, Textiles, and Vocational Education. A dean is at the head of each school and is responsible to the President for its conduct and success. The schools are comprised of departments. Each department is in charge of a professor who acts as its head. The President conducts all official business with each department through its dean.

The Faculty consists of all officers of instruction in the College. The voting members are the deans, professors, associate professors, and assistant professors.

The faculty meets at least once a month, or whenever called by the President, and is an advisory body to the President, on the instructional work of the College and such other business as he may bring before it.

The deans and directors of the various schools and departments meet weekly or when called by the President for consideration of matters affecting the welfare of the College. Departmental faculty meetings are held periodically.

Faculty Committees. In order to aid him in his executive duties and to carry on the instructional work of the College, the President appoints committees from the faculty. To these are assigned certain specified lines of work and the committees are clothed with full authority.

The Discipline Committee. The Discipline Committee is composed of six directors of departments and two full professors elected annually by the Board of Trustees. This committee constitutes the court of the College and tries cadets charged with serious offenses under the regulations. The President is the reviewing authority of the Discipline Committee, and may at his discretion set aside or modify the sentences imposed. A parent, or a cadet over age, has the right to appeal from the sentence of the Discipline Committee to the Board of Trustees, provided the appeal is lodged with the President of the College within thirty days. This appeal must be forwarded to the President of the Board of Trustees, who, if he deems the appeal meritorious, shall present it at the next regular or called meeting of the Board.

All trials by the Discipline Committee are open to the public and all testimony is taken under oath and recorded stenographically as is in a civil court. A student on trial may have some member of the faculty to assist him in his defense if he so desires.

MILITARY ORGANIZATION

The President. The President of the College shall have general command and government of the institution, watching over its administration, discipline, and instruction. He shall have authority to make rules from time to time, governing the granting of permits and furloughs to cadets; to inspect anything in a cadet's room or personal baggage; to suspend or modify these regulations, or to publish special regulations when he considers it necessary, which shall have the authority of the Board of Trustees until they shall act on the same. He shall prescribe the hours of study, drill, and recreation.

Commandant. The Commandant of Cadets, under the President, has supervision of the discipline of the Corps of Cadets. He shall prescribe the order in which the furniture, bedding, books, clothing equipment, etc., shall be arranged throughout the barracks and shall make a thorough inspection of the rooms, furniture, arms, equipment and uniforms of the cadets at least once each week. He shall have the right to inspect anything in a cadet's room or personal baggage. He shall perform such other duties as are prescribed in the regulations. He shall have the rank of Colonel.

Assistant Commandants. The Assistant Commandants shall perform such duties as may be prescribed for them by the President or Commandant.

Military Instruction. All students, excepting such students as are excused by the President, must take a minimum of three hours military instruction per week. All who pass the required physical examination must take the Basic Course prescribed by the War Department for the R. O. T. C. during their freshman and sophomore years.

Members of the junior and senior classes are selected by the Professor of Military Science and Tactics, subject to the approval of the President, to take the Advanced Course prescribed for the R. O. T. C., receiving certain financial benefits allowed by the Federal Government.

Cadet Officers and Non-commissioned Officers. The cadet officers and non-commissioned officers are appointed by the Professor of Military Science and Tactics, subject to the approval of the President. When practicable they shall be appointed from members of the R. O. T. C. who have been most studious and soldier-like in the performance of their duties and most exemplary in their conduct. No cadet may decline any office to which he may be appointed.

As a rule the officers shall be appointed from the senior class, the non-commissioned officers, except corporals, from the junior class, and the corporals from the sophomore class.

Study Hours. Study hours are those parts of the day which are designated for study and shall be prescribed in orders. All hours at which a student has no classes or other duties may be used as study hours and students are expected to use vacant hours during the day as well as the study period after supper for study.

Class Attendance. Punctuality in the attendance of classes and other prescribed duties is required at Clemson College. However, to allow for personal emergencies, a limited number of class absences is allowed, under the provisions of the class attendance regulations.

Furloughs. Every cadet is responsible for his class absences whether he is on a furlough or at the college. Restrictions regarding class absences are explained in the class attendance regulations. Any cadet who has been granted a furlough and who stays over the time stipulated, unless for sickness or other reason acceptable to the Commandant, will be administered a punishment not to exceed one month's arrest and twenty demerits. In case a cadet is prevented by sickness from returning at the stipulated time, he must submit a certificate from his attending physician. However, no such certificate will be accepted unless the President or the Commandant has been notified in advance of the expiration of the furlough.

Cadets returning late on furlough are placed in room arrest pending an investigation of the reason of the late return.

All communications from parents requesting furloughs for their sons must be addressed or sent directly to "The Commandant," and must set forth fully the reason for the request. No furlough will be granted unless the reasons given are considered satisfactory and sufficient justification for any loss of time from college duties; every student is held responsible for his class absences in accordance with the provisions of the class attendance regulations. Telegrams which do not explain fully will not be

accepted as complying with the rules. In any case in which business is given as a reason, the nature of the business must be explained fully.

A parent has the right to demand a discharge from college at any time and for any reason, but the college authorities reserve the right to grant or refuse to grant furloughs.

Week-End Leaves. Week-end leaves will be granted under conditions prescribed by the President.

Demerits. Any regular cadet who may receive within any one semester more than 90 demerits during his freshman year, or more than 70 demerits during his sophomore year, or more than 60 demerits during his junior year, or more than 50 demerits during his senior year; or any day cadet who may receive within any one semester more than 70 demerits during his freshman year, or more than 60 demerits during his sophomore year, or more than 50 demerits during his junior year, or more than 35 demerits during his senior year shall be required, by the President, to withdraw immediately from College.

Discharge. No cadet unless twenty-one years of age and paying his own way at college shall be honorably discharged except on the written application of his parents or guardian addressed to the President, or for reasons satisfactory to the President.

SCHOLASTIC REGULATIONS

1. The semester hour shall be the basis of all credits. One recitation hour or three laboratory or shop hours a week if self-contained, or two if considerable work is required out of the class period, shall constitute a semester hour.

2. The standing of a student in his work at the end of a semester shall be based on daily class work, regularity of attendance, tests or other work, and the final examinations.

3. Written examinations shall be required in all subjects at the end of each semester, except in certain laboratory or practical courses where not deemed necessary by the department faculty. A student who has been absent from more than one-fourth of the total number of class periods in any subject for a semester is debarred from the final examination.

4. A semester grade once reported to the Registrar shall be the final grade for the period covered.

5. No semester grade shall be given out or posted until the last day of the examination period. Grades will then be posted by instructors as promptly as possible.

6. When an instructor completes a subject he may hold an examination on it before beginning the next subject, provided such examination does not conflict with the regularly scheduled work.

7. *Reports and Grades*—Semester reports are mailed to parents after the end of each semester (usually within two or three weeks). Mid-semester reports do not form a part of the permanent record in the Registrar's office, but are sent to parents for their information.

The grading system shall be as follows:

A—Excellent. Indicates that the student is doing work of a very high character. The highest grade given.

B—Good. Indicates work that is satisfactory, though not of the highest order.

C—Fair. Indicates work of average or medium character.

D—Pass. Indicates work below the average and unsatisfactory. The lowest passing grade. For promotion to the junior and senior classes a student must have a grade above D on 50

per cent of his total credit hours. For graduation this average is also required.

E—Conditioned. Indicates a failure to satisfy the requirements as to daily recitations, tests or other work, as well as to the final examination, which condition in the opinion of the instructor may be made up by reexamination at some fixed time.

F—Failed. Indicates that a student knows so little of the subject that it must be repeated in order that credit may be received.

I—Incomplete Work. Indicates that a relatively small part of the semester's work remains undone. A grade *I* is not to be given a student who has made a grade F on his daily work.

"I-Abs. Ex." Indicates absence from examination on account of sickness or other satisfactory reason.

8. *Absences from Class. Removal of Grade I.*

Instructors keep a daily record of class attendance.

Students should not request instructors to excuse them from classes or to change class periods or examinations. Instructors have no authority to grant such requests.

A student who has been absent from class for more than three weeks will be dropped from the roll, and his grade card will be returned by his instructor to the Registrar's office. Such a student will be readmitted only by permission from the Registrar.

All class work missed on account of absences for good and sufficient reasons shall be made up to the satisfaction of the instructor within thirty days after the student returns to classes.

All incomplete grades (*I's*) for first semester not removed within thirty days after the beginning of the second semester shall become *F's*. All incomplete grades (*I's*) for second semes-

ter not removed within thirty days after the beginning of the first semester shall become failures (*F's*) and must be taken over as such.

A student who, for reasons satisfactory to the faculty, is absent from any of the first semester examinations will be graded *I-Abs. Exam.* and will be allowed to make up these examinations during the second semester at the period scheduled for this work. A student who is absent for satisfactory reasons from any of the second semester examinations shall stand them during the make-up period in September. A student who is absent from an examination without excuse is graded F.

9. *Special Examinations.* Any request for a special examination must be approved by (1) the instructor concerned, (2) the head of the department concerned, (3) the dean of the school, and (4) the registrar. When the request is approved by all those concerned, a special examination will be given on payment of a $2.00 fee.

10. *Removal of Conditions.* Only one opportunity shall be given a student to remove a condition (*E*) by a reexamination. A student who fails to pass such a reexamination shall be required to repeat the subject hour for hour in class. Not more than twelve credit hours of conditions for a session shall be removed by reexamination. A student shall not receive a grade higher than D when a deficiency is removed by reexamination.

Reexaminations shall be held as scheduled by the schedule committee. All conditions (*E's*) not removed during the time set aside for reexaminations shall become failures. Seniors may remove conditions during the week preceding Commencement.

11. *Removal of Failures.* A student who has failed (made a grade *F*) in a subject cannot receive credit for that subject until it has been repeated hour for hour in class, except that in the case of correlated laboratory work, the number of hours to be taken shall be determined by the instructor. Where separate

grades for class and laboratory work are given, that part of the subject shall be repeated in which the failure occurs.

12. *Withdrawals on Account of Unsatisfactory Work.* A student who at the end of the first semester does not make a grade of *D* or above on at least nine credit hours may be required to withdraw from college. A student who at the end of the session does not make a grade of *D* or above on at least eighteen credit hours shall not be permitted to return the following session.

13. *Promotion and Classification.* Promotion is by subjects, but a student is classified according to the amount of college work completed. The term freshmen is used to apply to new students with the exception of those who have completed as much as a full year of college work elsewhere. Old students who have not passed as much as twenty-four semester credit hours are also designated as freshmen. To be a sophomore a student must have to his credit at least twenty-four semester hours, and to be a junior a student must have completed a total number of semester hours within fourteen credits of the requirements of the first two years of his course, and must have a grade of C or above on at least one-half of his credits. A student must have completed a total number of semester hours within forty-seven credits of the requirements for graduation in his course, and must have a grade of C or above on at least one-half of his credits, before he may be enrolled as a senior or hold any office or appointment reserved by the faculty for seniors. Every student is responsible for knowing the requirements of his course and his status in regard to meeting these requirements.

14. *Amount of Class Work Permitted and Required. Prerequisites.* The normal amount of work a student is expected to schedule shall be the number of credit hours listed in the curriculum which he is pursuing, plus a proportionate number of electives as explained under "Requirements for Degree."

Students who do not pass thirteen or more credit hours in any semester shall not be permitted to take more than eighteen credit hours in the following semester.

A student shall not be permitted to schedule extra subjects or take over in addition to his normal schedule any work unless he has made during the preceding semester a grade of *B*, or above, on at least 50 per cent of the total scheduled credit hours. Not more than five clock hours of work may be scheduled in addition to the number of credit hours prescribed in the curriculum.

A continuation subject in the next higher class shall not be scheduled until credit has been received for its prerequisites.

15. *Dropping Class Work.* Upon the recommendation of the instructor and the director concerned to the President, a student's standing will be investigated and he may be required to drop a subject because of neglect, or lack of application or preparation. No student will be dropped under this rule without approval by the President.

A subject dropped after the middle of the semester is recorded as a subject failed unless the student shall have a daily average of *C* or above in that subject; in which case it will be recorded as "subject dropped."

16. *Time of Scheduling Work.* All students shall register for classes during the class registration period. A fee of two dollars is charged for registering late for class work.

17. *Deficiencies in Year Courses.* A student who receives a grade *F* on a first-semester subject that is prerequisite for a second-semester subject shall not schedule such second-semester subject without permission of the reexamination and promotion committee and the dean of the school concerned.

18. *How to raise a Grade E.* A grade *E* may be removed as prescribed in Section 11. However, if a student makes a grade *E* in a subject which continues beyond the first semester

and to the end of the second semester, the instructor may at the end of the session recommend that the grade be raised to a *D*, provided the grade made on the work of the second semester is *A* or *B*. In such a case the recommendation of the instructor shall be made a special report, must be approved by the dean of the school, and must accompany the grades of the second semester.

19. *Promotion to the Junior and Senior Classes.* A student shall not be permitted to enroll in the senior class until all the work of the freshman and sophomore classes has been completed. A student shall not be admitted to the junior or senior classes who has not received grades above *D* on 50 per cent of his credit hours (See also Rule 13 above).

20. *Requirements for Graduation.* For graduation a student must have completed as many credit hours as are required in his course with a grade above *D* on 50 per cent of the total credit hours. All work must be completed before 5 P. M. on the Wednesday preceding Commencement.

Residence of at least one regular session shall be required for graduation.

21. *Seniors Failing to Graduate.* A senior who fails to graduate because of either one *E* or one *F* on any subject shall have an opportunity of removing it by examination during the make-up period in September provided he can furnish evidence of having done satisfactory study. Failing to do this he shall repeat the subject.

22. *Change in Course.* Aimless shifting is discouraged, but for good reasons a change in course may be made at the end of any semester. The student must meet the full requirements of the course to which he changes.

23. *Textbooks and Supplies.* Each student shall be required to own his individual textbooks and the necessary equipment.

All requests from the students to the faculty must be made in writing.

PART V—DEGREES AND CURRICULA

REQUIREMENTS FOR DEGREES

The degree of Bachelor of Science is awarded to those students who satisfactorily complete one of the four-year curricula offered under the Schools of Agriculture, Chemistry, General Science, Textiles, Vocational Education, and to those students who complete either the course in Architecture or the course in Chemistry-Engineering under the School of Engineering. The degrees of Bachelor of Civil Engineering, Bachelor of Electrical Engineering, and Bachelor of Mechanical Engineering are awarded to the graduates of these respective courses.

In addition to the courses prescribed in the various curricula, at least fourteen hours of *free electives* are allowed. Other electives are subject to the approval of the dean of the school in which the major course is taken. For rules governing scholastic work, see the scholastic regulations.

All work for a degree must be completed by 5 P. M. on the Wednesday preceding graduation exercises. Residence of at least one regular session is required for graduation. Every candidate for a degree must pay to the Treasurer of the College the cost of his diploma before 5 P. M. on the Wednesday preceding graduation.

If all work toward a degree is not completed within five years after entrance, the student may be required to take additional courses.

PROFESSIONAL DEGREE IN ENGINEERING

The College offers the following professional engineering degrees: Civil Engineer, Electrical Engineer and Mechanical Engineer.

The requirements for these degrees are: (a) a Bachelor's degree from Clemson College in one of these three branches in

engineering, (b) five years of subsequent professional experience, one year of which must have been in responsible charge of engineering or engineering instruction, (c) the preparation of a thesis demonstrating distinct technical ability. (Detailed information regarding professional degrees may be obtained from the Registrar.)

COURSES OF STUDY

Twenty-three undergraduate courses of study are offered in the Schools of Agriculture, Chemistry, Engineering, General Science, Textiles, and Vocational Education. The major courses under each department are indicated below:

School of Agriculture
- Agricultural Economics and Rural Sociology
- Agricultural Engineering
- Agronomy
- Animal Husbandry
- Dairy
- Entomology
- Horticulture

School of Chemistry
- Chemistry

School of General Science
- General Science
- Pre-Medical

School of Engineering
- Architecture
- Chemistry—Engineering
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering

School of Textiles
- Textile Chemistry and Dyeing
- Textile Engineering
- Weaving and Designing

School of Vocational Education
- Agricultural Education
- Education
- Industrial Education
- Textile Industrial Education

In addition to the work in these regular courses, the college offers the opportunity for certain work after graduation to properly qualified students from this and other institutions. This work may be of an advanced nature or may be a special program of undergraduate studies. Students interested in work along this line should consult the Registrar or the Head of the Department concerned. Graduate Work is offered in the Sum-

mer in Vocational Education. For information, write the Registrar or the Dean of the School of Vocational Education.

While the college is glad to assist all who ask for help in securing employment, it does not guarantee positions to those who complete any of the courses of study.

In the curricula which follow are given the official title and number of the course, the descriptive title, the number of semester hours credit, and in parentheses the number of hours per week in class and laboratory, respectively.

SCHOOL OF AGRICULTURE

The basic curriculum in agriculture consists of fundamental and comprehensive subject matter in the School of Agriculture supplemented with courses in English, mathematics, and in the natural and social sciences. In addition to the courses required, opportunity is given for a broad selection of courses in the School of Agriculture and other schools of the College, which will prepare students for farming, positions as county agricultural agents, specialists and technicians in many fields of agriculture and allied industries, and other occupations of usefulness in an agricultural community.

The minimum requirements for the degree of Bachelor of Science in Agriculture are as follows:

Required courses in other schools	49	credits
Required courses in School of Agriculture	50 1/3	credits
Electives (of which 14 are free electives)	40 2/3	credits
Total minimum credits required	140	

All students in the School of Agriculture with the exception of those electing agricultural engineering, pursue the same curriculum during the freshman and sophomore years. Certain courses are also required of all agricultural students during the junior and senior years. In the junior and senior years a student must elect a major in agricultural economics, agronomy,

animal husbandry, dairying, entomology, or horticulture. Sufficient courses will be elected to complete the requirements for graduation.

Students of the School of Agriculture are given an opportunity to become familiar with the work of the agricultural experiment station, the extension service, crop pest commission, and fertilizer inspection and analysis. They also have opportunity to work on thesis problems in cooperation with members of the agricultural experiment station staff and in this way gain an insight into the methods employed in scientific research.

AGRICULTURE

Basic Curriculum
Required of all Agricultural Students

(Except those in Agricultural Engineering)

Freshman Year

First Semester		*Second Semester*	
*Agr. 11, Field Crops ____3	(3,0)	*A. H. 12, Types, Breeds and Market Classes ____2⅔	(2,2)
Bot. 13, Agricultural ____2⅔	(2,2)	Bot. 14, Agricultural ____3⅓	(2,4)
Chem. 11, General ____3⅔	(3,2)	Chem. 12, General ____3⅔	(3,2)
Drawing 11, Freehand ____ ⅔	(0,2)	Drawing 12, Mechanical____ ⅔	(0,2)
English 15, Comp. & Am. Lit._3	(3,0)	English 16, Comp. & Am. Lit._3	(3,0)
Math. 17, First Year College Math. ____3	(3,0)	Math. 18, First Year College Math. ____3	(3,0)
M. S. 11, Military Science___1	(0,3)	M. S. 12, Military Science___1	(0,3)
M. E. 13, Woodwork ____ ⅔	(0,2)		
	17⅔		17⅓

Sophomore Year

Chem. 21, Organic ____3	(2,3)	*Ag. Ec. 22, Ag. Econ.____3	(3,0)
*Dairy 21, Dairying ____2⅔	(2,2)	Agr. 20, Soils ____2⅔	(2,2)
English 21, Lit. and Adv. Comp. ____2	(2,0)	*Ag. Engr. 22, Farm Mach.__2⅔	(2,2)
*Geol. 21, Agricultural ____3	(3,0)	Chem. 22, Organic ____3	(2,3)
M. S. 21, Military Science ___1	(0,3)	English 22, Lit. and Adv. Comp. ____2	(2,0)
Phys. 29, Physics ____3⅔	(3,2)	*Hort. 22, General ____3	(2,3)
Zool. 21, Zoology ____2⅔	(2,2)	Phys. 30, Physics ____ ⅔	(0,2)
	18	M. S. 22, Military Science___1	(0,3)
			18

Junior Year

A. H. 31, Feeds and Feeding_3	(3,0)	Ag. Ec. 32, Farm Org. and Mgt. ____2⅔	(2,2)
Bact. 31, General ____3⅓	(2,4)	Agr. 32, or Dairy 32, Genetics_2⅔	(2,2)
Ent. 31, Introd. and Appl. Ent. ____2⅔	(2,2)	M. S. 32, Military Science___ ⅔	(0,2)
M. S. 31, Military Science___1	(0,3)	P. H. 32, Farm Poultry____2⅔	(2,2)
Major and Electives ____8-10		Major and Electives ____9⅓-11⅓	
	18-20		18-20

*Offered both semesters.

Senior Year

†Agr. 31, Fertilizers and Manures	2	(2,0)
Gov. 31, Government	3	(3,0)
M. S. 41, Military Science	1	(0,3)
Major and Electives	11-14	
	17-20	

Ag. Ec. 42, Rural Soc.	3	(3,0)
M. S. 42, Military Science	⅔	(0.2)
Major and Electives	12⅓-16⅓	
	16-20	

AGRICULTURAL ECONOMICS AND RURAL SOCIOLOGY MAJOR

Junior Year

First Semester

Required in Basic Curriculum	10	
Ag. Ec. 33, Stat. Methods	3	(3,0)
Electives	5-7	
	18-20	
Suggested Electives:		
Econ. 23, Economics	2	(2,0)
Econ. 31, Cont. Ec. Problems	3	(3,0)
Eng. 31, Public Speaking	2	(2,0)
French 11 or German 11	3	(3,0)
Hist. 31, Hist. of Civilization	3	(3,0)
Agr. 33, Forage Crops	3	(3,0)

Second Semester

Required in Basic Curriculum	8⅔	
Ag. Ec. 34, Public Finance	3	(3,0)
Ag. Ec. 36, Coop. in Ag.	3	(3,0)
Electives	3⅓-5⅓	
	18-20	
Suggested Electives:		
Econ. 24, Economics	2	(2,0)
Econ. 31, Cont. Ec. Problems	3	(3,0)
Eng. 32, Business Law	2	(2,0)
Hist. 32, Hist. of Civilization	3	(3,0)
French 12 or German 12	3	(3,0)

Senior Year

Required in Basic Curriculum	6	
Ag. Ec. 41, Principles of Marketing	3	(3,0)
Ag. Ec. 43, Farm Finance and Accounting	3	(3,0)
Ag. Ec. 51, Seminar	1	(1,0)
Electives	4-7	
	17-20	
Suggested Electives:		
French 21, or German 21	3	(3,0)
Agr. 45, Crop Nutrition	2	(2,0)
Eng. 31, Public Speaking	2	(2,0)
Agr. 43, Farm Problems	2	(2,0)

Required in Basic Curriculum	3⅔	
Ag. Ec. 46, Farmer Movements	3	(3,0)
Ag. Ec. 44, Land Economics	3	(3,0)
Ag. Ec. 52, Seminar	1	(1,0)
Ag. Ec. 40, Econ. Geography	3	(3,0)
Electives	2⅓-6⅓	
	16-20	
Suggested Electives:		
Econ. 24, Economics	2	(2,0)
Sociol. 31, Sociology	2	(2,0)
French 22 or German 22	3	(3,0)
Agr. 42, Soil Fert. and Mgt.	2	(2,0)
Hort. 52, Com. Pomology	2⅔	(2,2)

AGRONOMY MAJOR

Junior Year

First Semester

Required in Basic Curriculum	10	
Agr. 31, Fert. and Manures	2	(2,0)
Agr. 33, Forage Crops	3	(3,0)
English 31, Public Speaking	2	(2,0)
Electives	1-3	
	18-20	
Suggested Electives:		
Hort. 31, Plant Prop.	2⅔	(2,2)
Psychol. 35, Psychol. for Teachers	3	(2,2)

Second Semester

Required in Basic Curriculum	8⅔	
Bot. 30, Plant Phys.	3⅓	(2,4)
Electives	6-8	
	18-20	
Suggested Electives:		
Psychol. 36, Psychol. for Teachers	3	(2,2)
Ag. Engr. 38, Soil Conservation	2	(1,3)

†Agronomy students take Agronomy 31 in the Junior Year and schedule two hours additional elective in the Senior Year.

Senior Year

Required in Basic Curriculum—4
Agr. 53, Cotton ——— 2 (2,0)
Agr. 45, Crop Nutrition ——— 2 (2,0)
Agr. 47, Adv. Crop Lab. ——— ⅔ (0,2)
Agr. 49, Plant Breeding ——— 2⅔ (2,2)
Agr. 51, Seminar ——— 1 (1,0)
Agr. 61, Thesis ——— 1 (0,3)
Electives ——— 3⅓-6⅔

17-20

Suggested Electives:

Bot. 41, Field Crop Diseases—2⅔ (2,2)
Geol. 33, Mineralogy ——— 2⅔ (2,2)

Required in Basic Curriculum—3⅓
Agr. 42, Soil Fert. and Mgt.—2 (2,0)
Agr. 44, Adv. Soil Lab. ——— ⅔ (0,2)
Agr. 52, Seminar ——— 1 (1,0)
Agr. 62, Thesis ——— 1 (0,3)
Bact. 44, Soil Microbiology—3 (2,3)
Electives ——— 4⅔-8⅔

16-20

Suggested Electives:

Y. M. 28, Cotton Grading ——— ⅔ (0,2)
Ag. Ec. 40, Econ. Geography—3 (3,0)
Ag. Ec. 44, Land Economics—3 (3,0)

ANIMAL HUSBANDRY MAJOR

Junior Year

First Semester

Required in Basic Curriculum—10
A. H. 33, Judging ——— ⅔ (0,2)
A. H. 35, Farm Meats ——— 2 (0,6)
Electives ——— 5⅓-7⅓

18-20

Suggested Electvies:

English 31, Pub. Speaking—2 (2,0)
Ag. Engr. 35, Motors & Pwr. Machinery ——— 3 (2,3)
Psychol. 35, Psychology ——— 3 (2,2)
Ag. Ec. 33, Statistical Methods ——— 3 (3,0)
Dairy 31, Judging ——— 1 (0,3)
Agr. 33, Forage Crops ——— 3 (3,0)

Second Semester

Required in Basic Curriculum—8⅔
A. H. 34, Pork Production—2⅔ (2,2)
Electives ——— 6⅔-8⅔

18-20

Suggested Electives:

Hort. 32, Prin. Veg. Prod.—2⅔ (2,2)

Senior Year

Required in Basic Curriculum—6
A. H. 41, Advanced Feeds and Feeding ——— 2 (2,0)
A. H. 43, Beef Production—2⅔ (2,2)
Vet. 41, Anatomy and Phys.—2⅔ (2,2)
Electives ——— 3⅓-6⅔

17-20

Suggested Electives:

P. H. 41, Judging and Breeding ——— 2⅔ (2,2)
Eng. 31, Public Speaking—2 (2,0)
Ag. Ec. 43, Farm Finance—3 (3,0)

Required in Basic Curriculum—3⅓
A. H. 40, Animal Breeding—2⅔ (2,2)
A. H. 42, Horse and Sheep Production ——— 2⅔ (2,2)
A. H. 52, Seminar ——— 2 (2,0)
Electives ——— 5-9

16-20

Suggested Electives:

Vet. 42, Diseases ——— 2⅔ (2,2)
P. H. 42, Adv. Poultry ——— 2⅔ (2,2)
Dairy 48, Nutrition ——— 2 (2,0)
Hort. 54, Truck Crops ——— 2⅔ (2,2)
Eng. 49, Ag. Journalism ——— 2 (2,0)
Agr. 42, Soil Fert. and Mgt.—2 (2,0)
Ag. Engr. 38, Soil Conservation ——— 2 (1,3)

DAIRY MAJOR

Junior Year

First Semester

Required in Basic Curriculum—10
Dairy 35, Feeding and Mgt.—2⅔ (2,2)
Dairy 31, Judging —1 (0,3)
Electives —4⅓-6⅓
18-20

Suggested Electives:
Eng. 31, Public Speaking—2 (2,0)
Ag. Ec. 33, Stat. Methods—3 (3,0)
Psychol. 35, Psychology —3 (2,2)
Ag. Engr. 35, Motors & Pwr. Machinery —3 (2,3)
Agr. 33, Forage Crops —3 (3,0)

Second Semester

Required in Basic Curriculum—8⅔
Chem. 34, Dairy Chemistry—3 (2,3)
Dairy 34, Dairy Plant Org. and Management —3 (3,0)
Electives —3⅓-5⅓
18-20

Suggested Electives:
Eng. 32, Business Law —2 (2,0)
A. H. 34, Pork Production—2⅔ (2,2)

Senior Year

Required in Basic Curriculum—6
Dairy 41, Dairy Manufactures —3 (2,3)
Dairy 43, Breeding —1⅔ (1,2)
Dairy 51, Seminar —1 (1,0)
Vet. 41, Anatomy and Physiology —2⅔ (2,2)
Electives —2⅔-5⅔
17-20

Suggested Electives:
Ag. Ec. 43, Farm Finance—3 (3,0)
P. H. 41, Poultry Judging and Breeding —2⅔ (2,2)
Eng. 31, Public Speaking—2 (2,0)
Agr. 43, Farm Problems—2 (2,0)

Required in Basic Curriculum—3⅔
Bact. 40, Dairy Bact. —3 (2,3)
Dairy 42, Dairy Manufactures —3⅓ (2,4)
Dairy 48, Nutrition —2 (2,0)
Dairy 52, Seminar —1 (1,0)
Electives —3-7
16-20

Suggested Electives:
Eng. 49, Agr. Journalism—2 (2,0)
Vet. 42, Diseases —2⅔ (2,2)
P. H. 42, Poultry —2⅔ (2,2)
Agr. 42, Soil Fert. Mgt.—2 (2,0)
Hort. 54, Truck Crops —2⅔ (2,2)
Ag. Engr. 38, Soil Conservation —2 (1,3)

ENTOMOLOGY MAJOR

Junior Year

First Semester

Required in Basic Curriculum—10
Zool. 33, Adv. Zoology —2⅔ (2,2)
Electives —5⅓-7⅓
18-20

Suggested Electives:
German 11, German —3 (3,0)
Eng. 31, Public Speaking—2 (2,0)
Hist. 31, Hist. of Civ.—3 (3,0)

Second Semester

Required in Basic Curriculum—8⅔
Ent. 32, Gen. Entomology—3⅓ (2,4)
Electives —6-8
18-20

Suggested Electives:
Zool. 48, Intro. to Game Mgt. —2 (2,0)
German 12, German —3 (3,0)
Bot. 30, Plant Phys.—3⅓ (2,4)
Eng. 32, Bus. Law —2 (2,0)

Senior Year

Required in Basic Curriculum—6
Ent. 41, Ec. Entomology—2⅔ (2,2)
Ent. 45, Ins. Morphology—2⅔ (2,2)
Bot. 43, O. & T. Diseases—2⅔ (2,2)
Ent. 51, Seminar —1 (1,0)
Ent. 59, Introd. to Research—1⅔ (1,2)
Electives —⅓-3⅓

17-20

Suggested Electives:
Ent. 47, Parasitology —2 (2,0)
Ag. Ec. 33, Stat. Methods—3 (3,0)
Psych. 35, Psychology for Teachers —3 (2,2)

Required in Basic Curriculum—3⅔
Ent. 42, Econ. Ent. —2⅔ (2,2)
Ent. 44, Beekeeping —2⅔ (2,2)
Ent. 46, Systematic Ent. —2⅓ (1,4)
Ent. 52, Seminar —1 (1,0)
Electives —3⅔-7⅔

16-20

Suggested Electives:
Geol. 42, Meteorology —2 (2,0)
Eng. 49, Agri. Journalism—2 (2,0)
Psychol. 36, Psychology for Teachers —3 (2,2)
Soc. 31, Sociology —2 (2,0)

HORTICULTURE MAJOR

Junior Year

First Semester

Required in Basic Curriculum—10
Hort. 33, Prin. Veg. Production —2⅔ (2,2)
Hort. 31, Plant Propagation—2⅔ (2,2)
Electives —2⅔-4⅔

18-20

Suggested Electives:
Hist. 31, Hist. of Civilization—3 (3,0)
Eng. 31, Public Speaking —2 (2,0)
Ag. Ec. 33, Stat. Methods—3 (3,0)

Second Semester

Required in Basic Curriculum—8⅔
Botany 30, Plant Phys.—3⅓ (2,4)
Hort. 32, Landsc. Gardening—2⅔ (2,2)
Electives —3⅓-5⅓

18-20

Suggested Electives:
Ag. Ec. 34, Public Finance—3 (3,0)
Eng. 32, Business Law —2 (2,0)
Hist. 32, Hist. of Civilization—3 (3,0)

Senior Year

Required in Basic Curriculum—6
Bot. 43, O. and T. Crop Diseases —2⅔ (2,2)
Hort. 43, Breeding of Hort. Crops or Hort. 47, Nut Culture —2⅔ (2,2)
Hort. 41, Syst. Pomology—2⅔ (2,2)
Hort. 61, Seminar —1 (1,0)
Electives —2-5

17-20

Suggested Electives:
Hort. 45, Land. Design —2 (1,3)
Ag. Ec. 41, Prin. of Mktg.—3 (3,0)

Required in Basic Curriculum—3⅔
Hort. 52, Com. Pomology—2⅔ (2,2)
Hort. 54, Truck Crops —2⅔ (2,2)
Hort. 62, Seminar —1 (1,0)
Electives —6-10

16-20

Suggested Electives:
Hort. 46, Floriculture —2⅔ (2,2)
Hort. 56, Land. Design —2 (1,3)
Ag. Ec. 40, Economic Geog.—3 (3,0)
Geol. 42, Meteorology —2 (2,0)
Agr. 42, Soil Fert. and Mgt.—2 (2,0)
Ent. 42, Ec. Entomology —2⅔ (2,2)
Ag. Engr. 38, Soil Conservation —2 (1,3)

AGRICULTURAL ENGINEERING

This course is provided for the training of students in the principles of engineering as applied to agriculture. Due to the rapidly increasing demand for the services and advice of men trained in both agricultural and engineering technique, this

course fills a necessary place in adequately preparing men to meet these demands.

The curriculum is formulated requiring sufficient courses in the liberal arts, the foundation subjects of engineering and agriculture, and the specific agricultural engineering subjects, such as Farm Mechanics, Surveying and Drainage, Motors and Power Machinery, etc., all of which will equip the engineer for any phase of this profession.

AGRICULTURAL ENGINEERING

Freshman Year

First Semester		*Second Semester*	
Bot. 13, Agricultural ____2⅔	(2,2)	Bot. 14, Agricultural ____3⅓	(2,4)
Chem. 11, General ____3⅔	(3,2)	Chem. 12, General ____3⅔	(3,2)
Drawing 13, Engr. Drawing_1⅓	(0,4)	Drawing 14, Engr. Drawing__1⅓	(0,4)
Eng. 15, Comp. & Am. Lit.__3	(3,0)	Eng. 16, Comp. & Am. Lit.__3	(3,0)
Math. 11, Trigonometry ____5	(5,0)	Math. 12, Analytics ____5	(5,0)
M. E. 17 or M. E. 12____2	(0,6)	M. E. 12 or M. E. 17____2	(0,6)
M. S. 11, Military Science___1	(0,3)	M. S. 12, Military Science___1	(0,3)
18⅔		19⅓	

Sophomore Year

*A. H. 12, Types, Breeds, and Market Classes ____2⅔	(2,2)	Ag. Engr. 22, Farm Mach.___2⅔	(2,2)
Ag. Engr. 23, Agr. Mechanics_3	(2,3)	Drawing 26, Elem. Des. & Kin. ____ ⅔	(0,2)
Drawing 25, Mechanical ____ ⅔	(0,2)	Eng. 22, Lit. & Adv. Comp.___2	(2,0)
Eng. 21, Lit. & Adv. Comp.___2	(2,0)	Physics 22, 24, General ____5	(4,3)
Physics 21, 23, General ____5	(4,3)	Math. 22, Int. Calculus ____5	(5,0)
Math. 21, Dif. Calculus ____5	(5,0)	M. S. 22, Military Science___1	(0,3)
M. S. 21, Military Science___1	(0,3)	16⅓	
19⅓			

Junior Year

Ag. Engr. 35, Motors & Pwr. Mach. ____3	(2,3)	Ag. Ec. 32, Farm Mgt.____2⅔	(2,2)
C. E. 31, Mechanics ____3	(3,0)	Agr. 11, Field Crops ____3	(3,0)
Dairy 21, Introduc. ____2⅔	(2,2)	C. E. 23, Surveying ____1	(1,0)
E. E. 35, Elec. Mach. ____2	(2,0)	C. E. 23a, Survey Field and Office Work ____ ⅔	(0,2)
E. E. 35a, Elec. Lab. ____ ⅔	(0,2)	C. E. 32, Strength of Materials ____3	(3,0)
Geol. 43, Engr. Geology ____2	(2,0)	Hort. 22, General ____3	(2,3)
M. S. 31, Military Science___1	(0,3)	M. S. 32, Military Science___ ⅔	(0,2)
Electives ____3⅔-5⅔		Electives ____4-6	
18-20		18-20	
Suggested Electives:		**Suggested Electives:**	
A. H. 31, Feeds & Feeding__3	(3,0)	Agr. 32 or Dairy 32____2⅔	(2,2)
Econ. 23, Elem. Economics__2	(2,0)	Econ. 24, Elem. Econ.____2	(2,0)
Gov. 31, Am. Gov. and Pol. Parties ____3	(3,0)		

*Offered both semesters.

If a student in Electrical or Mechanical Engineering does outstanding work in his freshman year, he may arrange with the dean of the School of Engineering to take both Electrical and Mechanical Engineering. This is particularly true of the non-R. O. T. C. student. These two courses may be taken in five years, allowing considerable elective work to be taken in General Science, Textile, and possibly some courses in Civil Engineering.

A student in Mechanical Engineering or Electrical Engineering if non-R. O. T. C. is permitted to elect considerable work in the Textile School if he plans his junior and senior years in advance. The R. O. T. C. student may arrange for a half year or one year additional, in which case he may take considerable Textile work provided he decides this by the beginning of the junior year.

Architecture

The information given below applies to the four-year course in Architecture as now given. In order to meet the modern trend the College is offering a five-year course in Architecture leading to the degree of Bachelor in Architecture. In this course the technical work of the lower classes is extended and elaborated, the fifth year design comprising a thesis in which the student selects his subject and writes the program to meet the approval of the faculty of Architecture. Work in Domestic Architecture, Specification Writing, Estimating, Chemistry, Surveying, Advanced History, and allied subjects are included. A copy of the curriculum may be secured upon request.

The course is a well-rounded cultural one, fitting the graduate not only for the practice of architecture, but for a number of allied professions. All work is individual and every effort is made to develop the student's individuality, imagination, and creative ability. Skillful draftsmanship and artistic presentation are insisted upon.

Architecture is one of the fine arts and much time is given to freehand drawing, color work, history of architecture, painting, and sculpture. Architectural design, the principal subject, extends through four years. In this the student is given a written program of requirements for a building or group of buildings and under the criticism of the instructor works out a solution embodying his own ideas. Freehand drawing consists of sketching and rendering from casts, nature and life, in pencil, charcoal, pen and ink, crayons, water color and oils. This extends through four years. History of architecture, historic ornament, and history of art are taught in the sophomore, junior and senior years.

Fundamental courses are given in mathematics, graphic statics, strength of materials, reinforced concrete, building construction, and in working drawings which consist of complete plans and specifications for a building prepared as in the office of a practising architect.

The work in architecture occupies especially designed quarters on the top floor of Riggs Hall. One feature is a large drafting room equipped with individual drafting tables. This is a marked advantage since all may study their problems in design and have the benefit of mutual help and criticism. Adjoining this room and equipped with controlled lighting, is a studio containing plaster casts and models suitable for the needs in freehand drawing and color work. Class rooms are equipped with lanterns and slides.

A working library adjoining the drafting rooms contains many volumes concerning architecture and allied subjects, photographs, plans and illustrations, lantern slides, drawings, models, and files of the leading architectural magazines, both American and foreign. This is in addition to the main college library. In the structural drafting room is a complete built-in exhibit of building materials and appliances especially arranged for instructional purposes.

Each spring students are expected to take an educational trip to a large city to study examples of architecture and construction.

Six weeks of practical architectural work approved by the architectural faculty are required for graduation (Arch. 28).

ARCHITECTURE

Freshman Year

First Semester		*Second Semester*	
Arch. 11, Elems. of Arch.____1⅔	(0,5)	Arch. 12, Arch. Design_____1⅔	(0,5)
Arch. 13, Freehand Drawing_1⅓	(0,4)	Arch. 14, Freehand Drawing_1⅓	(0,4)
Arch. 15, Descrip. Geom.____ ⅔	(0,2)	Arch. 16, Sh. Shad. & Persp.__ ⅔	(0,2)
English 15, Comp. and Am. Lit. _____3	(3,0)	English 16, Comp. and Am. Lit. _____3	(3,0)
*French 11, _____3	(3,0)	*French 12 _____3	(3,0)
*Chem. 11, Gen. Chem._____3⅓	(3,2)	*Chem. 12, Gen. Chem. _____3⅓	(3,2)
Math. 11, Trigonometry ____5	(5,0)	Math. 12, Analytics & College Algebra _____5	(5,0)
Physics 11, General _____3⅓	(3,2)	Physics 12, General _____3⅓	(3,2)
M. S. 11, Military Science___1	(0,3)	M. S. 12, Military Science___1	(0,3)
19⅓ or 20		19⅓ or 20	

Sophomore Year

Arch. 21, Arch. Design _____4⅔	(0,14)	Arch. 22, Arch. Design _____4⅔	(0,14)
Arch. 23, Antique and Color_1	(0,3)	Arch. 24, Antique and Color_1	(0,3)
Arch. 25, Hist. of Arch._____4	(4,0)	Arch. 26, Hist. of Arch._____4	(4,0)
*French 21 _____3	(3,0)	*French 22 _____3	(3,0)
*Hist. 31, Hist. of Civ. ____3	(3,0)	*Hist. 32, Hist. of Civ. _____3	(3,0)
English 21, Lit. and Adv. Comp. _____2	(2,0)	English 22, Lit. and Adv. Comp. _____2	(2,0)
Math. 23, Dif. Calculus ____3	(3,0)	Math. 24, Int. Calculus _____3	(3,0)
M. S. 21, Military Science___1	(0,3)	M. S. 22, Military Science___1	(0,3)
18⅔		18⅔	

Junior Year

Arch. 31, Arch. Design _____7⅓	(0,22)	Arch. 32, Arch. Design _____7⅓	(0,22)
Arch. 33, Sketching & Paint._1	(0,3)	Arch. 34, Sketching & Paint._1	(0,3)
Arch. 35, Bldg. Constr. _____3	(3,0)	Arch. 36, Bldg. Constr. _____2	(2,0)
Arch. 37, Working Drawings_ ⅔	(0,2)	Arch. 38, Working Drawings_ ⅔	(0,2)
Arch. 39, Hist. Ornament ___ ⅔	(0,2)	C. E. 32, Strength of Materials_3	(3,0)
C. E. 31, Mechanics _____3	(3,0)	C. E. 34, Graphic Statics_____1⅔	(1,2)
English 31, Public Speaking_2	(2,0)	English 32, Business Law____2	(2,0)
M. S. 31, Military Science___1	(0,3)	M. S. 32, Military Science___ ⅔	(0,2)
Elective _____2		Elective _____3	
20⅔		21⅓	

Senior Year

Arch. 41, Arch. Design _____6⅔	(0,20)	Arch. 42, Arch. Design _____6⅔	(0,20)
Arch. 43, Bldg. Constr. _____3	(3,0)	Arch. 44, Bldg. Constr. _____3	(3,0)
Arch. 45, Struct. Design ____2	(0,6)	Arch. 46, Struct. Design ____2⅔	(0,8)
Arch. 47, Mech. Plant _____2	(2,0)	Arch. 48, Profess. Prac. ____1	(1,0)
Arch. 49, Life Drawing ____ ⅔	(0,2)	Arch 40, Life Drawing _____ ⅔	(0,2)
C. E. 47, Reinforced Conc.___2	(2,0)	Arch. 40.5, Hist. of Art ____2	(2,0)
Econ. 23, Economics _____2	(2,0)	Sociol. 31, Sociology _____2	(2,0)
M. S. 41, Military Science___1	(0,3)	M. S. 42, Military Science___ ⅔	(0,2)
Elective _____2		Elective ___ _____3	
21⅓		21⅔	

*French 11, 12, 21, and 22 or Chemistry 11, 12 and History 31, 32.

CHEMISTRY-ENGINEERING

This course combines a well-rounded course in chemistry with fundamental courses in physics, mechanics, and engineering subjects with a view of training men for work in the chemical industries or industries in which both chemistry and engineering knowledge is necessary. The industries are more and more abandoning rule-of-thumb methods and are using men with a knowledge both of chemistry and engineering to design their plans and supervise the operation of various processes. An engineering knowledge is required in solving the engineering problems which arise in connection with the chemical industry or chemical processes. Economical production as well as the turning out of a good product naturally requires an interest in discovering where losses occur; in developing uses for by-products; and recovering and utilizing waste products.

It is hardly possible in a four-year course to cover well this field both in chemistry and in engineering. The course offered leads to a B.S. degree and is not claimed to be a course in Chemical Engineering, though the graduates are qualified for employment as chemists in manufacturing plants or industrial research, as gas plant chemists, and many other fields; and their training makes it possible for them to obtain a Chemical Engineering degree in a minimum of time.

CHEMISTRY-ENGINEERING

Freshman Year

First Semester		*Second Semester*	
Chemistry 13, General ------4	(3,3)	Chemistry 14, General ------4	(3,3)
Drawing 13, Engr. Drawing--1⅓	(0,4)	Drawing 14, Engr. Drawing-1⅓	(0,4)
English 15, Comp. and Amer. Lit. ----------3	(3,0)	English 16, Comp. and Amer. Lit. ----------3	(3,0)
*History 14, Amer. Ec. Hist.-2	(2,0)	*Gov. 12, Amer. Gov't. and Polit. Parties ----------2	(2,0)
Math. 11, Trigonometry ----5	(5,0)	Math. 12, Analytics & College Algebra ----------5	(5,0)
M. E. 17, or M. E. 12-------2	(0,6)	M. E. 12, or M. E. 17, Shop-2	(0,6)
M. S. 11, Military Science---1	(0,3)	M. S. 12, Military Science---1	(0,3)
	18⅓		18⅓

*Modern Language 3 Hr. Option.

Sophomore Year

Chem. 23, Qualitative	4⅔	(2,8)	Chem. 24, Quantitative	4⅔	(2,8)
Drawing 25, Mechanical	⅔	(0,2)	Drawing 26, Elem. Des. and Kin.	⅔	(0,2)
English 21, Lit. and Adv Comp.	2	(2,0)	English 22, Lit. and Adv. Comp.	2	(2,0)
Math. 21, Dif. Calculus	5	(5,0)	Math. 22, Int. Calcul.	5	(5,0)
Physics 21 and 23, General	5	(4,3)	Physics 22 and 24, General	5	(4,3)
M. S. 21, Military Science	1	(0,3)	M. S. 22, Military Science	1	(0,3)
	18⅓			18⅓	

Junior Year

Chem. 25, Organic	5	(3,6)	Chem. 26, Organic	5	(3,6)
Chem. 33, Quantitative	1⅓	(0,4)	Drawing 32, Mach. Des.	1	(0,3)
Drawing 31, Kin. & Mach. Design	1	(0,3)	English 32, Bus. Law	2	(2,0)
English 31, Public Speaking	2	(2,0)	M. E. 24, Mach. Shop	1	(0.3)
M. E. 23, Mach. Shop	1	(0,3)	C. E. 32, Strength of Mat.	3	(3,0)
C. E. 31, Mechanics	3	(3,0)	M. E. 36, Thermodynamics	3	(3,0)
M. E. 35, Power Plants	3	(3,0)	M. E. 36a, Mech. Lab.	1	(0,3)
M. S. 31, Military Science	1	(0,3)	M. S. 32, Military Science	⅔	(0,2)
Elective	2		Elective	3	
	19⅓			19⅓	

Senior Year

Chem. 35, Organic	2⅔	(2,2)	Chem. 32, Physical	4⅓	(3,4)
Chem. 31, Physical	4⅓	(3,4)	Chem. 54, Industrial	2	(2,0)
Chem. 53, Industrial	2	(2,0)	Geol. 34, Mineralogy	2⅔	(2,2)
Econ. 23, Economics	2	(2,0)	E. E. 36, Elec. Mach.	3	(3,0)
Geol. 33, Mineralogy	2⅔	(2,2)	E. E. 36a, Elec. Lab.	⅔	(0,2)
M. S. 41, Military Science	1	(0,3)	M. S. 42, Military Science	⅔	(0,2)
Elective	5		Elective	4	
	19⅔			17⅓	

CIVIL ENGINEERING

This course is intended to prepare young men for entrance upon professional practice in civil engineering, and also to meet the needs of those who, having been engaged in engineering work without a course of instruction, desire to equip themselves for successful competition with those who have had such instruction.

In connection with the technical studies, liberal training is given in English, history, economics, pure mathematics, and the physical sciences. The course will also be found to embrace a considerable amount of drawing, shop work, and short courses in electrical engineering and mechanical engineering.

The distinctive work pursued by students in this course includes the field and office work of surveying and leveling; topo-

graphic surveying and drafting; the location and construction of railroads and highways, bridges, and other related structures; investigation of the strength of the materials of construction and the theories involved in their use; mansonry construction; foundations on land and under water; a particular study of highway engineering, including a laboratory course covering all the standard tests of highway material, both bituminous and non-bituminous; municipal and sanitary engineering, including the study of bacteriology, water-supply, sewerage and drainage; and a brief study of engineering law relating to contracts and specifications. Actual design, as well as analytic investigation, is given in all cases.

A summer surveying camp of two weeks duration is required between the sophomore and junior years.

CIVIL ENGINEERING

Freshman Year

First Semester		*Second Semester*	
Chemistry 11, General ____3⅔	(3,2)	Chemistry 12, General ____3⅔	(3,2)
Drawing 13, Engr. Drawing_1⅓	(0,4)	Drawing 14, Engr. Drawing_1⅓	(0,4)
English 15, Comp. and Amer. Lit. ____3	(3,0)	English 16, Comp. and Amer. Lit. ____3	(3,0)
*History 14, Amer. Ec. Hist._2	(2,0)	*Gov. 12, Amer. Gov't and Polit. Parties ____2	(2,0)
Math. 11, Trigonometry ____5	(5,0)	Math. 12, Analytics & College Algebra ____5	(5,0)
M. E. 17, or M. E. 12, Shop_2	(0,6)	M. E. 12, or M. E. 17, Shop_2	(0,6)
M. S. 11, Military Science___1	(0,3)	M. S. 12, Military Science___1	(0,3)
18		18	

*Modern Language 3 Hr. Option.

Sophomore Year

C. E. 21, Surveying ____2	(2,0)	and Office Work ____ ⅔	(0,2)
C. E. 21a, Surveying Field and Office Work ____1	(0,3)	C. E. 22, Surveying ____3	(3,0)
Drawing 25, Mechanical ____ ⅔	(0,2)	C. E. 22a, Surveying Field Drawing 28, Structural ____ ⅔	(0,2)
English 21, Lit. and Adv. Comp. ____2	(2,0)	English 22, Lit. and Adv. Comp. ____2	(2,0)
Math. 21, Dif. Calculus ____5	(5,0)	Math. 22, Int. Calculus ____5	(5,0)
M. S. 21, Military Science___1	(0,3)	M. S. 22, Military Science___1	(0,3)
Physics 21, 23, General____5	(4,3)	Physics 22, 24, General ____5	(4,3)
*Elective ____2		*Elective ____2	
18⅔		19⅓	

C. E. 30—Summer Surveying Camp. Two weeks, 3 credits.

*Suggest consultation with head of Department.

Junior Year

C. E. 31, Mechanics	3 (3,0)	C. E. 32, Mech. of Matr.	3 (3,0)
C. E. 35, Route Surveying	3 (3,0)	C. E. 34, Graphic Statics	1⅔ (1,2)
C. E. 37, Structural Probs.	1⅓ (0,4)	C. E. 36, Roads & Pavements	4 (3,3)
English 31, Pub. Speaking	2 (2,0)	C. E. 38, Struc. Problems	2 (0,6)
M. E. 33, Mech. Engr.	3 (3,0)	E. E. 36, Elec. Mach.	3 (3,0)
M. E. 33a, Lab.	⅔ (0,2)	E. E. 36a, Elec. Lab.	⅔ (0,2)
M. S. 31, Military Science	1 (0,3)	M. S. 32, Military Science	⅔ (0,2)
Physics 33, Astronomy	2 (2,0)	Elective	3
Elective	2		
	18		18

Senior Year

C. E. 41, Struct. Design	3 (2,3)	Bact. 42, Sanitary	3 (2,3)
C. E. 43, Road Mat. and Test.	1 (0,3)	English 32, Bus. Law	2 (2,0)
C. E. 45, Reinf. Concrete	3 (2,3)	C. E. 42, Structural Des.	4 (2,6)
C. E. 49, Hydraulics	3 (3,0)	C. E. 44, Road M. T. Lab.	1 (0,3)
Econ. 23, Economics	2 (2,0)	C. E. 46, Mun. and San. Engr.	5 (5,0)
Geology 43, Engr. Geology	2 (2,0)	M. S. 42, Military Science	⅔ (0,2)
M. E. 42a, Hydro. & Mat. Lab.	⅔ (0,2)	Elective	3
M. S. 41, Military Science	1 (0,3)		
Elective	2		
	17⅔		18⅔

ELECTRICAL ENGINEERING

The field of electrical engineering embraces the generation, transmission, and utilization of electrical energy for domestic and industrial commercial purposes. It also includes illumination, transportation, communication, and the design, manufacture, and sale of electrical machines and devices.

The curriculum for students in electrical engineering contains a selected series of studies which enables the student to enter any division of the field of electrical engineering.

The first two years are devoted largely to sciences and other subjects prerequisite to the general field of engineering. The last two years are more specialized and embrace those technical courses which are pertinent to electrical engineering.

The theoretical courses in science and engineering are paralleled and reinforced by strong laboratory courses through which the student may make his own determinations of the characteristics of engineering materials and machines. The laboratories are well equipped for this work.

The entire course is directed toward the development of initiative and self-reliance, so that the student may enter his chosen field with reasonable hope of usefulness and success.

ELECTRICAL ENGINEERING

Freshman Year

First Semester		*Second Semester*	
Chemistry 11, General ——3⅔	(3,2)	Chem. 12, General ——3⅔	(3,2)
Drawing 13, Engr. Drawing—1⅓	(0,4)	Drawing 14, Engr. Drawing—1⅓	(0,4)
English 15, Comp. and Amer. Lit. ——3	(3,0)	English 16, Comp. and Amer. Lit. ——3	(3,0)
*History 14, Amer. Ec. Hist.—2	(2,0)	Gov. 12, Amer. Gov't and Polit. Parties ——2	(2,0)
Math. 11, Trigonometry ——5	(5,0)	Math. 12, Analytics and College Algebra ——5	(5,0)
M. E. 17, or M. E. 12, Shop—2	(0,6)	M. E. 12, or M. E. 17, Shop—2	(0,6)
M. S. 11, Military Science—1	(0,3)	M. S. 12, Military Science—1	(0,3)
18		18	

*Modern Language 3 Hr. Option.

Sophomore Year

Drawing 25, Mechanical—— ⅔	(0,2)	Drawing 26, Elem. Des. & Kin. ⅔	(0,2)
C. E. 23, Surveying ——1	(1,0)	E. E. 22, D. C. Circuits—2	(2,0)
C. E. 23a, Surveying Field and Office Work —— ⅔	(0,2)	English 22, Lit. and Adv. Comp. ——2	(2,0)
Econ. 23, Economics ——2	(2,0)	Math. 22, Int. Calculus ——5	(5,0)
English 21, Lit. and Adv. Comp. ——2	(2,0)	M. E. 24, Mach. Shop ——1	(0,3)
Math. 21, Dif. Calculus ——5	(5,0)	M. S. 22, Military Science—1	(0,3)
M. E. 23, Mach. Shop ——1	(0,3)	Physics 22 and 24, General—5	(4,3)
M. S. 21, Military Science—1	(0,3)	Elective ——2	
Physics 21 and 23, General—5	(4,3)	18⅔	
18⅓			

Junior Year

Drawing 31, Kin. & Mach. Design ——1	(0,3)	Drawing 32, Mach. Des.——1	(0,3)
E. E. 31, D. C. Machinery—5	(5,0)	E. E. 32, A. C. Circuits—5	(5,0)
E. E. 31a, Elec. Measurement—1⅓	(0,4)	E. E. 32a, Elec. Lab. ——1⅓	(0,4)
Eng. 31, Public Speaking——2	(2,0)	M. E. 32, Mechanics ——3	(3,0)
M. E. 31, Mechanics ——3	(3,0)	M. E. 36, Thermodynamics—3	(3,0)
M. E. 35, Power Plants——3	(3,0)	M. E. 36b, Mech. Lab. ——1	(0,3)
M. S. 31, Military Science—1	(0,3)	M. S. 32, Military Science— ⅔	(0,2)
Elective ——2		Elective ——3	
18⅓		18	

Senior Year

E. E. 41, A. C. Mach.——5	(5,0)	E. E. 42, A. C. Machinery —3	(3,0)
E. E. 41a, Elec. Lab. ——2	(1,3)	E. E. 42a, Elec. Lab. ——2	(1,3)
E. E. 45, Elec. Design ——1	(0,3)	E. E. 44, Power Trans. ——3	(3,0)
E. E. 47, Electronics ——2	(2,0)	E. E. 46, Elec. Design ——1	(0,3)
M. E. 41, Mech. Engr. ——2	(2,0)	English 32, Business Law —2	(2,0)
M. E. 41a, Mech. Lab. ——1	(0,3)	M. E. 42.5, Hydraulics——2	(2,0)
M. E. 49, Mech. of Materials—3	(3,0)	M. S. 42, Military Science— ⅔	(0,2)
M. S. 41, Military Science——1	(0,3)	Elective ——5	
Elective ——2		18⅔	
19			

MECHANICAL ENGINEERING

The course in mechanical engineering is designed to give the graduate as broad training as possible and to fit him for some specific type of work.

It embraces practically all forms of engineering which have for their objects the application of the forces of nature to the accomplishment of the processes of industry. The course is designed to give an intimate knowledge of the materials used in engineering, the laws of mechanics, and the characteristics of various types of machinery.

The shop courses embrace wood work, forge work, foundry and machine work. The purpose of this instruction is not to turn out skilled workmen but to train those faculties of mind which may best be reached through the work of the hand, and to give the student a clear knowledge of the characteristics and possibilities of the materials used in engineering.

Considerable time is given to the study of the laws of the physical sciences, in such subjects as physics, chemistry, mechanics, electricity and magnetism, and thermodynamics.

During the fourth year stress is laid on the application of the fundamental principles already covered so that the graduate may be able to design or manage those types of machines which ordinarily come under the supervision of the mechanical engineer.

The mechanical engineer should have a liberal education; therefore, in addition to the regular technical work, training is given in English, history, economics, civics, and related subjects.

MECHANICAL ENGINEERING

Freshman Year

First Semester

Chemistry 11, General	3⅔	(3,2)
Drawing 13, Engr. Drawing	1⅓	(0,4)
English 15, Comp. and Amer. Lit.	3	(3,0)
*History 14, Amer. Ec. Hist.	2	(2,0)
Math. 11, Trigonometry	5	(5,0)
M. E. 17, or M. E. 12, Shop	2	(0,6)
M. S. 11, Military Science	1	(0,3)
	18	

Second Semester

Chemistry 12, General	3⅔	(3,2)
Drawing 14, Engr. Drawing	1⅓	(0,4)
English 16, Comp. and Amer. Lit.	3	(3,0)
*Gov. 12, Amer. Gov't. and Polit. Parties	2	(2,0)
Math. 12, Analytics and College Algebra	5	(5,0)
M. E. 12, or M. E. 17, Shop	2	(0,6)
M. S. 12, Military Science	1	(0,3)
	18	

*Modern Language 3 Hr. Option.

Sophomore Year

Drawing 25, Mechanical	⅔	(0,2)
Econ. 23, Economics	2	(2,0)
English 21, Lit. and Adv. Comp.	2	(2,0)
Math. 21, Dif. Calculus	5	(5,0)
M. E. 23, Mach. Shop	1	(0,3)
M. S. 21, Military Science	1	(0,3)
Physics 21 and 23, General	5	(4,3)
Elective	2	
	18⅔	

Drawing 26, Elem. Des. and Kin.	⅔	(0,2)
C. E. 23, Surveying	1	(1,0)
C. E. 23a, Surveying Field and Office Work	⅔	(0,2)
English 22, Lit. and Adv. Comp.	2	(2,0)
Math. 22, Int. Calculus	5	(5,0)
M. E. 24, Mach. Shop	1	(0,3)
M. S. 22, Military Science	1	(0,3)
Physics 22 and 24, General	5	(4,3)
Elective	2	
	18⅓	

Junior Year

Drawing 31, Kin. & Mach. Des.	1	(0,3)
E. E. 33, D. C. Machinery	4	(4,0)
E. E. 33a, Elec. Measurements	1	(0,3)
English 31, Public Speaking	2	(2,0)
M. E. 31, Mechanics	3	(3,0)
M. E. 35, Power Plants	3	(3,0)
M. E. 35a, Mech. Lab.	1	(0,3)
M. S. 31, Military Science	1	(0,3)
Elective	2	
	18	

Drawing 32, Mach. Design	1	(0,3)
E. E. 34, A. C. Circuits	4	(4,0)
E. E. 34a, Elec. Lab.	1	(0,3)
M. E. 38, Ind. Engr.	2	(2,0)
M. E. 32, Mechanics	3	(3,0)
M. E. 36, Thermodynamics	3	(3,0)
M. E. 36a, Mech. Lab.	1	(0,3)
M. S. 32, Military Science	⅔	(0,2)
Elective	3	
	18⅔	

Senior Year

E. E. 43, A. C. Machinery	3	(3,0)
E. E. 43a, Elec. Lab.	1	(0,3)
M. E. 43, Power Plants	3	(3,0)
M. E. 43a, Mech. Lab.	1⅓	(0,4)
*M. E. 45, Gas Engines	2	(2,0)
*M. E. 45a, Design	1	(0,3)
M. E. 49, Mechan. of Materials	3	(3,0)
M. S. 41, Military Science	1	(0,3)
Elective	2	
	17⅓	
*M. E. 47, Heat and Vent.	2	(2,0)
*M. E. 47a, Design	1	(0,3)

English 32, Business Law	2	(2,0)
M. E. 42, Hydraulics	3	(3,0)
M. E. 42a, Mech. Lab.	⅔	(0,2)
M. E. 44, Power Plants	3	(3,0)
M. E. 44a, Lab.	1⅓	(0,4)
*M. E. 46, Steam Turbines	2	(2,0)
*M. E. 46a, Design	1	(0,3)
M. S. 42, Military Science	⅔	(0,2)
**Elective	5	
	18⅔	
*M. E. 48, Heat and Vent.	2	(2,0)
*M. E. 48a, Design	1	(0,3)

*M. E. 47, 47a, 48, 48a are optional in place of M. E. 45, 45a, 46, 46a.
**Two electives must be approved by head of Department.

SCHOOL OF GENERAL SCIENCE

The School of General Science offers four-year courses both in General Science and in Pre-Medicine. The course in General Science is planned to meet the needs of students desiring general training in the sciences. It is recommended for men preparing themselves for the professions and it is also available for capable men who find themselves unsuited for technical and vocational courses. The course in Pre-Medicine is described on page 84.

GENERAL SCIENCE

Freshman Year

First Semester		*Second Semester*	
English 15, Comp. and Am. Lit.	3 (3,0)	English 16, Comp. and Am. Lit.	3 (3,0)
History 14, Am. Econ. History	2 (2,0)	Gov. 12, Amer. Gov't	2 (2,0)
Botany 11, General	3⅓ (2,4)	Zool. 12, Gen. Zoology	3⅓ (2,4)
Chemistry 11, General	3⅔ (3,2)	Chemistry 12, General	3⅔ (3,2)
M. S. 11, Military Science	1 (0,3)	M. S. 12, Military Science	1 (0,3)
Modern Language	3 (3,0)	Modern Language	3 (3,0)
Math. 17	3 (3,0)	Math. 18	3 (3,0)
	19		19

Sophomore Year

English 21, Lit. and Adv. Comp.	2 (2,0)	English 22, Lit. and Adv. Comp.	2 (2,0)
Physics 11, General	3⅔ (3,2)	Physics 12, General	3⅔ (3,2)
M. S. 21, Military Science	1 (0,3)	M. S. 22, Military Science	1 (0,3)
Modern Language (Cont.)	3 (3,0)	Modern Language (Cont.)	3 (3,0)
Geology 23, or Natural Science	3 (3,0)	Nat. Science, or Approved Elect.	3 (3,0)
Math. 21, or Approved Elective	5 (5,0)	Math. 22, or Approved Elective	5 (5,0)
	17⅔-20		17⅔-20

Junior Year

English 31, Public Speaking	2 (2,0)	English 32, Business Law	2 (2,0)
Psychol. 35, Psychology	3 (2,2)	Psychol. 36, Psychology	3 (2,2)
History 31, Hist. of Civiliz.	3 (3,0)	History 32, Hist. of Civiliz.	3 (3,0)
M. S. 31, Military Science	1 (0,3)	M. S. 32, Military Science	⅔ (0,2)
Approved Elective	6-8	Approved Elective	6-8
Free Elective	3	Free Elective	3⅓
	18-20		18-20

Senior Year

Econ. 23, Economics	2 (2,0)	Econ. 24, Economics	2 (2,0)
M. S. 41, Military Science	1 (0,3)	Sociol. 31, Sociology	2 (2,0)
Approved Elective	10-11⅓	M. S. 42, Military Science	⅔ (0,2)
Free Elective	5	Approved Elective	8-10
English 50, Thesis	⅔ (0,2)	Free Elective	5⅓
	18⅔-20		18-20

Approved Electives. All courses offered by the following departments: Agricultural economics, botany and bacteriology, chemistry, economics and government, psychology and sociology, English, geology and mineralogy, history, mathematics, foreign language, physics, religion, vocational education, and zoology and entomology. Courses in the following subjects are also approved electives: Art appreciation, genetics, history of architecture, and history of art.

Additional Requirements

Modern Language. For graduation in this course at least the second year of one foreign language must be completed in college.

Electives. Of the minimum of one hundred and forty-six semester credit hours required for graduation, not more than sixteen and two-thirds may be free electives. All other courses selected by the student must be from the list of approved electives. The approved electives must include at least eight hours, exclusive of required courses, in one of the following: calculus, chemistry, or physics; and at least eight hours, exclusive of required courses, in one of the following: economics and government and history, English, modern languages, or sociology and psychology.

Majors and Minors. For graduation in this course a major of at least twenty semester hours and a minor of at least fourteen semester hours must be completed, respectively, in two of the following fields: economics and government and history, English, mathematics, modern language, physics, and sociology and psychology. The credit hours which constitute the major and minor, respectively, may include the required subjects, approved electives, and the eight-hour requirements outlined above.

PRE-MEDICAL COURSE

The course in Pre-Medicine is designed to meet the general entrance requirements of standard medical colleges. Since, however, requirements for entrance to various medical schools are

not uniform, the student before choosing his electives should consult the specific requirements of the medical college of his preference.

Those preparing for the study of medicine are advised to complete four years of undergraduate work before entering a medical school. Clemson College, however, will award the degree of Bachelor of Science in Pre-Medicine to a student who, after completing all requirements of the first three years of the Pre-Medical Course, is graduated from a medical college approved by the American Medical Association, provided that during his three years at Clemson he has elected and received credit for Economics 23 and 24 and for Sociology 31.

PRE-MEDICINE

Freshman Year

(Same as General Science. See page 82)

Sophomore Year

First Semester		*Second Semester*	
Eng. 21, Lit. and Adv. Comp.--2	(2,0)	Eng. 22, Lit. and Adv. Comp.--2	(2,0)
Physics 13, General ----------4	(3,3)	Physics 14, General ---------4	(3,3)
German 21 or French 21-----3	(3,0)	German 22 or French 22 ----3	(3,0)
Math. 23, Dif. Calculus -----3	(3,0)	Math. 24, Int. Calculus -----3	(3,0)
Chem. 25, Organic ----------5	(3,6)	Chem. 26, Organic ----------5	(3,6)
M. S. 21, Military Science --1	(0,3)	M. S. 22, Military Science---1	(0,3)
Drawing 11, Freehand ------ ⅔	(0,2)		
18⅔		18	

Junior Year

English 31, Public Speaking--2	(2,0)	English 32, Business Law --2	(2,0)
Psychol. 35, Psychology ----3	(2,2)	Psychol. 36, Psychology -----3	(2,2)
History 31, Hist. of Civiliz.--3	(3,0)	History 32, Hist. of Civiliz.--3	(3,0)
M. S. 31, Military Science --1	(0,3)	M. S. 32, Military Science--- ⅔	(0,2)
Bact. 31, General (3⅓) or		Chem. 24, Quant. Anal. -----4⅔	(2,8)
Chem. 23, Qualitative ------4⅔		Zoology, or Approved Elective-2⅔	
Zoology 33, Adv. Zool.------2⅔	(2,2)	*Elective ----------3	
*Elective ----------3-4⅓			
19⅓		19	

Senior Year

M. S. 41, Military Science---1	(0,3)	M. S. 42, Military Science--- ⅔	(0,2)
Econ. 23, Economics -------2	(2,0)	Econ. 24, Economics --------2	(2,0)
Sociol. 31, Sociology --------2	(2,0)	Chem. 32, or Approved	
Chem. 31, or Approved		Elective ----------4⅓	
Elective ----------4⅓		Chem. 38, or Approved	
Chem. 37, or Approved		Elective ----------2	
Elective ----------2		*Elective ----------8	
*Elective ----------6			
17⅓		17	

*Of all elective courses not more than sixteen and two-thirds hours may be free elective. All other courses selected by the student must be from the list of General Science approved electives.

SCHOOL OF TEXTILES

The growth of the textile industry in the South has been phenomenal, and it offers many opportunities to young men for advancement to excellent positions of responsibility. At the same time there has more recently developed a very heavy demand for men specially trained in the different branches of the textile industry; namely, textile engineering, textile chemistry and dyeing, and weaving and designing. With increased competition, prices become lower and a higher quality of work is necessary in order to get the business. Increasing labor and material costs require greater economies and new and shorter processes. These results are possible through the cooperation of a competent technical staff.

The textile course in its entirety (see courses outlined below) has been developed to meet this demand for well-trained men to fill these positions. It has been cooperatively developed by many men who have spent years in the textile industry, right out in the mills, on the front line, studying these very problems and processes, and who are familiar with the type of training necessary for this work. The course has not been developed from the purely theoretical or academic standpoint.

Throughout the four years practical work with regular textile equipment in the college plant supplements the theory taught. This is done with the view of combining theory and practice and developing in the student habits of accurate observation and some skill in manipulation of the machines involved. In this work special consideration is given to economy of time, precision of results, and attention to details, as well as to methods of fundamental importance.

These courses so equip the graduate that he may confidently look forward to a successful career provided he supplements his training with the necessary energy, application, and tact.

Students in the School of Textiles are encouraged to work in the industry during their vacation periods in order to get

the practical mill experience which is necessary for advancement in the industry. This practical experience better enables the student to understand the theory underlying these manufacturing practices.

TEXTILE ENGINEERING

The course in textile engineering is designed to give the student sound training, both theoretical and practical, in the sciences upon which manufacturing processes are based. It is a well-rounded course in that the strictly textile subjects are supplemented by related fundamental engineering subjects as well as by subjects of general educational value (See School of Textiles for complete write-up). All Yarn Manufacturing courses for freshmen, sophomores, and juniors are offered both semesters.

TEXTILE ENGINEERING

Freshman Year

First Semester		*Second Semester*	
Chemistry 11, General ____3⅔	(3,2)	Chemistry 12, General ____3⅔	(3,2)
Drawing 13, Engineering ____1⅓	(0,4)	Drawing 14, Engineering ____1⅓	(0,4)
English 15, Comp. & Am. Lit. ____3	(3,0)	English 16, Comp. & Am. Lit. ____3	(3,0)
History 14, Am. Ec. Hist.____2	(2,0)	Gov. 12, Am. Gov't. and Pol. Parties ____2	(2,0)
Math. 11, Trigonometry ____5	(5,0)	Math. 12, Analytics & College Algebra ____5	(5,0)
M. E. 15, Woodwork ____ ⅔	(0,2)	M. S. 12, Military Science___1	(0,3)
M. S. 11, Military Science___1	(0,3)	*W. D. 12, Textiles ____1⅔	(1,2)
*Y. M. 11, Textiles ____1⅔	(1,2)		
18⅓		17⅔	

Sophomore Year

Drawing 25, Mechanical ____ ⅔	(0,2)	Drawing 26, El. Des. & Kin.. ⅔	(0,2)
English 21, Lit. & Adv. Comp. ____2	(2,0)	English 22, Lit. & Adv. Comp. ____2	(2,0)
Math. 23, Dif. Calculus ____3	(3,0)	**W. D. 26 or Y. M. 24, Mill Problems ____2	(2,0)
M. E. 23, Machine Shop ____1	(0,3)	M. E. 24, Machine Shop ____1	(0,3)
M. S. 21, Military Science___1	(0,3)	M. S. 22, Military Science___1	(0,3)
Physics 11, General ____3⅔	(3,2)	Physics 12, General ____3⅔	(3,2)
W. D. 21, Elementary Design_2	(2,0)	W. D. 22, Adv. Design ____2	(2,0)
W. D. 23, Weaving ____ ⅔	(0,2)	W. D. 24, Weaving ____1	(0,3)
*Y. M. 21, Pickers ____2⅔	(2,2)	*Y. M. 22, Cards & Drawing Frames ____2⅔	(2,2)
**W. D. 25 or Y. M. 23, Mill Problems ____2	(2,0)	*Y. M. 28, Cotton Grading___ ⅔	(0,2)
18⅔		16⅔	

Junior Year

M. E. 31, Mechanics ------3	(3,0)	Eng. 32, Bus. Law ---------2	(2,0)
E. E. 35, Elec. Mach. ------2	(2,0)	M. E. 34, Mech. Engr. ------3	(3,0)
E. E. 35a, Elec. Lab. ------ ⅔	(0,2)	M. E. 34a, Mech. Engr. Lab. ⅔	(0,2)
M. S. 31, Military Science---1	(0,3)	M. S. 32, Military Science--- ⅔	(0,2)
T. Chem. 31, Tex. Chem. ----2⅔	(2,2)	T. Chem. 32, Tex. Chem.----2⅔	(2,2)
W. D. 31, Design ----------2	(2,0)	T. Chem. 46.5, Microscopy --1⅓	(1,1)
W. D. 33, Fabric Analysis---1	(0,2)	W. D. 34, Fabric Analysis---1	(0,2)
W. D. 35, Weaving -------- ⅔	(0,2)	W. D. 36, Weaving ---------- ⅔	(0,2)
*Y. M. 31, Roving Frames--2⅔	(2,2)	*Y. M. 34, Spinning --------3	(2,3)
Electives ----------3		Electives ----------3⅔	
	18⅔		18⅔

Senior Year

Econ. 23, Econ. ----------2	(2,0)	Sociol. 31, Sociology -------2	(2,0)
Eng. 31, Public Speaking ---2	(2,0)	M. S. 42, Military Science--- ⅔	(0,2)
M. S. 41, Military Science---1	(0,3)	T. Chem. 42, Dyeing -------2⅔	(2,2)
T. Chem. 41, Dyeing -------2⅔	(2,2)	W. D. 44, Warp Preparation-2	(2,0)
W. D. 41, Jac. Weaving-----1⅔	(1,2)	W. D. 46, Weaving -------- ⅔	(0,2)
W. D. 43, Cost Finding ----3	(3,0)	W. D. 48, Knitting --------- ⅔	(0,2)
W. D. 45, Pattern Weaving-- ⅔	(0,2)	Y. M. 42, Combers ---------1⅔	(1,2)
Y. M. 43, Doubling & Draft..1⅔	(1,2)	Y. M. 44, Mill Econ. -------2	(2,0)
Y. M. 50, Thesis ----------1	(0,2)	W. D. 50, Thesis ----------1	(0,2)
Electives ----------2⅔		Electives ----------4⅔	
	18⅓		18

*Offered both semesters.

**W. D. 25 and Y. M. 24 or Y. M. 23 and W. D. 26 constitute required textile mathematics in Textile Engineering.

TEXTILE CHEMISTRY AND DYEING

The many new chemical processes now available for use in the bleaching, dyeing, and finishing of textiles are largely responsible for the present demand for chemists in the textile industry. Such processes when properly executed give new, novel and desirable results; they require, however, the careful supervision of technically trained men.

This four-year course has been planned to give a thorough training in the fundamental theories of chemistry and dyeing with special emphasis on the application of these theories to the practical accomplishments of the textile industry. (See School of Textiles for complete write-up.)

TEXTILE CHEMISTRY AND DYEING

Freshman Year

First Semester		*Second Semester*	
Chemistry 13, General ——4	(3,3)	Chemistry 14, General ——4	(3,3)
Drawing 13, Engineering ——1⅓	(0,4)	Drawing 14, Engineering ——1⅓	(0,4)
English 15, Comp. & Am. Lit. ——3	(3,0)	English 16, Comp. & Am. Lit. ——3	(3,0)
History 14, Am. Ec. Hist.——2	(2,0)	Gov. 12, Am. Gov't. and Pol. Parties ——2	(2,0)
Math. 11, Trigonometry ——5	(5,0)	Math. 12, Analytics & College Algebra ——5	(5,0)
M. E. 15, Woodwork —— ⅔	(0,2)	M. S. 12, Military Science——1	(0,3)
M. S. 11, Military Science——1	(0,3)	*W. D. 12, Textiles ——1⅔	(1,2)
*Y. M. 11, Textiles ——1⅔	(1,2)	18	
18⅔			

Sophomore Year

Chem. 23, Qualitative ——4⅔	(2,8)	Chem. 24, Quantitative ——4⅔	(2,8)
Eng. 21, Lit. and Adv. Comp. ——2	(2,0)	Eng. 22, Lit. and Adv. Comp. ——2	(2,0)
Math. 23, Diff. Calculus ——3	(3,0)	Math. 24, Int. Calculus ——3	(3,0)
Physics 11, General ——3⅔	(3,2)	Physics 12, General ——3⅔	(3,2)
W. D. 21, Elem. Design. ——2	(2,0)	W. D. 22, Adv. Design ——2	(2,0)
W. D. 23, Weaving —— ⅔	(0,2)	W. D. 24, Weaving ——1	(0,3)
M. S. 21, Military Science——1	(0,3)	M. S. 22, Military Science——1	(0,3)
*Y. M. 28, Cotton Grading— ⅔	(0,2)	17⅓	
17⅔			

*Offered both semesters.

Junior Year

Chem. 31a, Physical ——3	(3,0)	Chem. 32a, Physical ——3	(3,0)
Econ. 23, Economics ——2	(2,0)	Sociol. 31, Sociology ——2	(2,0)
Eng. 31, Pub. Speaking ——2	(2,0)	Eng. 32, Business Law ——2	(2,0)
T. C. 35, Textile Chemistry—5	(4,3)	T. C. 38, Textile Chemistry—5	(4,3)
T. C. 47, Microscopy ——1⅓	(1,1)	Chem. 33, Adv. Quantitative—1⅓	(0,4)
M. S. 31, Military Science——1	(0,3)	M. S. 32, Military Science— ⅔	(0,2)
Electives ——4⅔		Chem. 46, Stoichiometry ——2	(2,0)
19		Electives ——3	
		19	

Senior Year

T. C. 41.5, Dyeing ——5⅓	(4,4)	T. C. 42.5, Dyeing ——5⅓	(4,4)
T. C. 43, Cellulose ——2	(2,0)	T. C. 48, Synthetic Fibers —2	(2,0)
T. C. 45, Textile Anal. ——2	(1,3)	T. C. 46, Textile Anal. ——2	(1,3)
Chem. 43, Colloids ——2	(2,0)	Chem. 44, Colloids ——2	(2,0)
T. C. 33, Tech. Writing——1	(1,0)	T. C. 34, Tech. Writing ——1	(1,0)
M. S. 41, Military Science——1	(0,3)	M. S. 42, Military Science— ⅔	(0,2)
T. C. 50, Thesis ——1	(0,3)	T. C. 51, Thesis ——1	(0,3)
Electives ——3⅔		Electives ——4	
18		18	

WEAVING AND DESIGNING

This course has been provided to meet a growing demand from those who desire special instruction relating to the weaving and designing of fabrics. Special attention is paid to deco-

rative design, dobby design, Jacquard design, pattern weaving, and rayon processing. (See School of Textiles, for complete account).

WEAVING AND DESIGNING

Freshman Year

(Same as Textile Engineering. See page 86)

Sophomore Year

First Semester		*Second Semester*	
Drawing 25, Mechanical ---- ⅔	(0,2)	Arch. 14, Drawing ----------1⅓	(0,4)
English 21, Lit. & Adv. Comp. ----------2	(2,0)	English 22, Lit. & Adv. Comp. ----------2	(2,0)
Math. 23, Dif. Calculus -----3	(3,0)	M. E. 24, Machine Shop-----1	(0,3)
M. E. 23, Machine Shop ----1	(0,3)	M. S. 22, Military Science---1	(0,3)
M. S. 21, Military Science---1	(0,3)	Physics 12, General ---------3⅔	(3,2)
Physics 11, General --------3⅔	(3,2)	W. D. 22, Advanced Des.----2	(2,0)
W. D. 21, Elem. Design ----2	(2,0)	W. D. 24, Weaving --------1	(0,3)
W. D. 23, Weaving --------- ⅔	(0,2)	*Y. M. 22, Cards & Drawing Frames ----------2⅔	(2,2)
*Y. M. 21, Pickers ---------2⅔	(2,2)	**W. D. 26 or Y. M. 24, Mill Problems ----------2	(2,0)
**W. D. 25 or Y. M. 23, Mill Problems ----------2	(2,0)	*Y. M. 28 ---------- ⅔	(0,2)
	18⅔		17⅓

Junior Year

Arch. 23.5, Dec. Des. & Color_1	(0,3)	Arch. 24.5, Dec. Des. & Color_1	(0,3)
E. E. 35, Elec. Mach. ------2	(2,0)	English 32, Business Law----2	(2,0)
E. E. 35a, Elec. Lab. -------- ⅔	(0,2)	M. E. 34, Mech. Engr. ------3	(3,0)
M. S. 31, Military Science---1	(0,3)	M. E. 34a, M. E. Lab. ----- ⅔	(0,2)
M. E. 31, Mechanics --------3	(3,0)	M. S. 32, Military Science--- ⅔	(0,2)
W. D. 31, Dobby Design ---2	(2,0)	W. D. 32, Adv. Dobby Des._2	(2,0)
W. D. 33, Fabric Analysis --1	(0,2)	W. D. 34, Fabric Analysis---1	(0,2)
W. D. 35, Weaving --------- ⅔	(0,2)	W. D. 36, Weaving --------- ⅔	(0,2)
W. D. 37, Rayon Processing-1⅔	(1,2)	*Y. M. 34, Spinning --------3	(2,3)
*Y. M. 31, Roving Frames--2⅔	(2,2)	Electives ----------4	
Electives ----------3			18
	18⅔		

Senior Year

Arch. 33.5, Dec. Des. & Comp. ----------1	(0,3)	Sociol. 31, Sociology --------2	(2,0)
English 31, Public Speaking_2	(2,0)	M. S. 42, Military Science--- ⅔	(0,2)
Econ. 23, Econ. ----------2	(2,0)	Text. Chem. 46.5, Microscopy-1⅓	(1,1)
M. S. 41, Military Science---1	(0,3)	Text. Chem. 40, Dyeing ----- ⅔	(0,2)
T. Chem. 39, Dyeing-------- ⅔	(0,2)	W. D. 42, Jacquard Design---2⅓	(1,4)
W. D. 41, Jacquard Weaving-1⅔	(1,2)	W. D. 44, Warp Preparation--2	(2,0)
W. D. 43, Cost Finding -----3	(3,0)	W. D. 46.5, Pattern Weaving_2	(0,6)
W. D. 45.5, Pattern Weaving_2	(0,6)	W. D. 48, Knitting ---------- ⅔	(0,2)
Y. M. 43, Doubling & Dftg.--1⅔	(1,2)	W. D. 50, Thesis ----------1	(0,2)
Electives ----------3⅔		Y. M. 44, Mill Econ. -------2	(2,0)
	18⅔	Electives ----------3⅓	
			18

*Y. M. courses offered both semesters.
**W. D. 25 and Y. M. 24 or Y. M. 23 and W. D. 26 constitute required textile mathematics in Weaving and Designing.

SCHOOL OF VOCATIONAL EDUCATION

The School of Vocational Education offers four-year curricula leading to the degree of Bachelor of Science in Vocational Agricultural Education, Education, Industrial Education, and Textile Industrial Education. Courses are also made available for students of the other Schools of the College. By making a proper program of studies it is possible for students to meet the professional requirements in subject matter and in education and to qualify for the teacher's certificate in this State. Students who are planning to teach in high schools are advised to plan not only their courses in education, but also their subject-matter courses so as to fulfill the State requirements for the particular type of work which they expect to teach in the state. (The office of the School of Vocational Education has a file of information on this subject.) Students who are interested are invited to consult the Dean and other members of the Vocational Education staff for information.

Practice teaching in several subjects, in cooperation with the State Department of Education and nearby school systems, constitutes part of the student's training. Students should plan this work well in advance so that they may conform to the schedule of the high school including registration at the opening of school. Publishers of State-adopted textbooks have been invited to place copies of their publications on file in the Education library, and many have responded. These publications are available for examination by teachers and prospective teachers during the regular session of summer school.

While employment cannot be guaranteed, the School of Vocational Education maintains a Teacher Placement Service with which students who desire aid in securing employment may register and from which superintendents of schools and other employers may receive assistance in communicating with, or interviewing prospective teachers. Both students and employers of teachers are invited to use this service. The Office of the Teacher Placement Service is in Room 103, Education Building.

VOCATIONAL AGRICULTURAL EDUCATION

The curriculum in Agricultural Education is designed to give the student a cross-section of the types of agriculture in the State and to provide an opportunity to study agriculture from the standpoint of the teacher, the practical farmer, and the closely related agricultural business man where the farm as a unit is emphasized.

Professional training of the student is planned to provide an opportunity for the study of a cross-section of rural life and its organizations with particular emphasis on the contribution of the public school. Students participate in community organizations as a part of their first-hand training. They are taught to cooperate with State and National organizations which affect rural life and agriculture directly and indirectly. This curriculum with the central aim on teaching is designed primarily to train students for the professional field of teaching vocational agriculture and other closely related fields in which a knowledge of the business of farming is essential, and in which skill in dealing with groups of people as well as with individuals is important.

One hundred forty semester hours of credit are required for graduation. Fourteen semester hours of free electives are allowed.

Teachers of agriculture and others who are interested in graduate training in Agriculture Education should procure a copy of the 1939 summer school catalog as soon as published. A number of the courses listed in the Agricultural Education curriculum and other appropriate courses in Agricultural Education will be offered in the 1939 summer session.

VOCATIONAL AGRICULTURAL EDUCATION

Freshman Year

First Semester

Agr. 11, Field Crops	3	(3,0)
Chem. 11, General	3⅔	(3,2)
Draw. 11, Freehand	⅔	(0,2)
Eng. 15, Comp. & Am. Lit.	3	(3,0)
Math. 17, First Yr. Col.	3	(3,0)
M. S. 11, Military Science	1	(0,3)
Voc. Ed. 11, Orientation	1	(1,0)
Zool. 21, Gen. Zool.	2⅔	(2,2)
	18	

Second Semester

A. H. 12, Types, Breeds & Mkt. Classes	2⅔	(2,2)
Bot. 16, Agricultural	3⅓	(2,4)
Chem. 12, General	3⅔	(3,2)
Draw. 12, Mechanical	⅔	(0,2)
Eng. 16, Comp. & Am. Lit.	3	(3,0)
Gov. 12, Amer. Govt.	2	(2,0)
M. S. 12, Military Science	1	(0,3)
	16⅓	

Sophomore Year

Ag. Ec. 22, Ag. Econ.	3	(3,0)
Ag. Engr. 22, Farm Mach.	2⅔	(2,2)
Chem. 21a, Organic	2	(2,0)
Eng. 21, Lit. & Adv. Comp.	2	(2,0)
Hort. 22, General Hort.	3	(2,3)
M. S. 21, Military Science	1	(0,3)
Electives	3	
	16⅔	

Suggested Electives:

Bact. 31, Gen. Bact.	3⅓	(2,4)
Econ. 23, Prin. of Econ.	2	(2,0)
Hist. 14, Am. Econ. Hist.	2	(2,0)
Rel. 23	2	(2,0)

Agr. 20, Soils	2⅔	(2,2)
Dairy 21, Dairying	2⅔	(2,2)
Eng. 22, Lit. & Adv. Comp.	2	(2,0)
Geol. 21, Agric.	3	(3,0)
M. S. 22, Military Science	1	(0,3)
Phys. 27, General	3⅔	(3,2)
Voc. Ed. 22, Int. to Voc. Ed.	1	(1,0)
	16	

Suggested Electives:

Econ. 24, Prin. of Econ.	2	(2,0)
Econ. 32, Money & Banking	3	(3,0)
Hist. 14, Am. Econ. Hist.	2	(2,0)

Junior Year

Agr. 31, Fertilizers	2	(2,0)
A. H. 31, Feeds & Feed.	3	(3,0)
Eng. 31, Pub. Speak.	2	(2,0)
M. S. 31, Military Science	1	(0,3)
Voc. Ed. 31, Int. to Ag. Ed.	3	(1,6)
Z. & E. 31, Int. & Appl. Ent.	2⅔	(2,2)
	13⅔	

Suggested Electives:

Ag. Ec. 33, Stat. Methods	3	(3,0)
Agr. 33, Forage Crops	3	(3,0)
A. H. 33, Judging	⅔	(0,2)
A. H. 35, Farm Meats	2	(0,6)
Dairy 31, Judging	1	(0,3)
Hort. 31, Plant Prop.	2⅔	(2,2)
Soc. 31, Elem. Sociology	2	(2,0)

Ag. Ec. 32, Farm Org. & Mgt.	2⅔	(2,2)
Ag. Engr. 38, Soil Consv.	2	(1,3)
A. H. 34, Pork Production	2⅔	(2,2)
Hort. 32, Landscape Des.	2⅔	(2,2)
M. S. 32, Military Science	⅔	(0,2)
P. H. 32, Farm Poultry	2⅔	(2,2)
Voc. Ed. 30, Ed. Psych.	3	(3,0)
	16⅓	

Suggested Electives:

Ag. Engr. 46, Farm Buildings	2	(1,3)
Eng. 32, Bus. Law	2	(2,0)
Z. & E. 44, Beekeeping	2⅔	(2,2)

Senior Year

Ag. Ec. 41, Marketing	3	(3,0)
Ag. Ec. 43, Finance & Acct.	3	(3,0)
Agr. 43, Farm Problems	2	(2,0)
Agr. 45, Crop Nutrition	2	(2,0)
Bot. 45, Plant Pathology	2⅔	(2,2)
M. S. 41, Military Science	1	(0,3)
Voc. Ed. 41, Prin. Voc. Ed.	4	(1,9)
	17⅔	

Suggested Electives:

Agr. 53, Cotton	2	(2,0)
A. H. 42, Beef Prod.	2⅔	(2,2)
Vet. Sci. 41, Anat. & Phy.	2⅔	(2,2)

Hort. 54, Truck Crops	2⅔	(2,2)
M. S. 42, Military Science	⅔	(0,2)
Vet. Sci. 42, Ani. Diseases	2⅔	(2,2)
Voc. Ed. 40, Pract. Teach.	5	(0,15)
Voc. Ed. 42, Meth. in Ag. Ed.	3	(3,0)
	14	

Suggested Electives:

Ag. Ec. 42, Rural Sociology	3	(3,0)
Agr. 42, Soil Fert. & Mgt.	2	(2,0)
Hort. 52, Commercial Pom.	2⅔	(2,2)
P. H. 42, Poultry Prod. & Mgt.	2⅔	(2,2)

EDUCATION

The purpose of this curriculum is to train for high school teaching in the fields indicated below. The curriculum has been planned with the view of providing both subject matter and professional courses. It meets the State requirements for certification in South Carolina under the new regulations. The subject-matter fields are designated as teaching majors and teaching minors. The technical and vocational groups are included with the purpose of providing an occupational background for teachers. Free electives are included to permit the student to exercise his own choice in at least a part of his work. Students who desire to enter into the Vocational Agriculture field or the Industrial Education field should enroll in one of those specialized curricula. (See pages 91 and 94.) The Education Curriculum, with appropriate electives, provides excellent preparation for teachers of physical education. (See Voc. Ed. 33, 49.5, 58, 64, etc.)

For the degree of Bachelor of Science in Education the following grouping must be made: a teaching major of 20 semester hours; a first teaching minor of at least 12 semester hours; a second teaching minor of at least 12 semester hours (the semester hours in the teaching major and teaching minor groups may include required subjects in these fields as indicated below); at least 12 semester hours in a vocational or technical field, and 14 semester hours free electives are also required. Other elections are subject to the approval of the Dean. A total of 136 semester hours is required for graduation. The groups of teaching majors, teaching minors, etc., are indicated below.

EDUCATION

Freshman Year

First Semester		*Second Semester*	
Botany 13, Agricultural ----2⅔	(2,2)	Botany 14, Agricultural -----3⅓	(2,4)
Chemistry 11, General ------3⅓	(3,2)	Chemistry 12, General ------3⅓	(3,2)
English 15, Comp. and Am. Lit. ----------3	(3,0)	English 16, Comp. and Am. Lit. ----------3	(3,0)
History 14, Am. Econ. Hist..2	(2,0)	Gov. 12, American Gov't.----2	(2,0)
Math. 11 or 17 ----------5 or 3		Math. 12 or 18 ----------5 or 3	
M. S. 11, Military Science---1	(0,3)	M. S. 12, Military Science---1	(0,3)
Vocational Education -------2			
19⅓ or 17⅓		18 or 16	

Sophomore Year

Bact. 31, General Bacteriology	3⅓	(2,4)	
English 21, Lit. and Adv. Comp.	2	(2,0)	
M. S. 21, Military Science	1	(0,3)	
Chemistry 21 or 23	3	(2,3)	
Zool. 21, Gen. Zoology	2⅔	(2,2)	
Physics 11 or 21-23	3⅔ or 5	(3,2)	
Voc. or Tech. group	3		
	18⅔ or 20⅔		

Econ. 24, Economics	2	(2,0)	
English 22, Lit. and Adv. Comp.	2	(2,0)	
M. S. 22, Military Science	1	(0,3)	
Chemistry 22 or 24	3	(2,3)	
Physics 12 or 22-24	3⅔ or 5	(3,2)	
Voc. or Tech. group	3		
Free electives	2		
	16⅔ or 18⅔		

Junior Year

English 31, Public Speaking	2	(2,0)	
M. S. 31, Military Science	1	(0,3)	
Voc. Ed. 35, Psychology	3	(2,2)	
Voc. Ed. 39, Principles	3	(3,0)	
Ent. 31, Int. to Appl. Ent.	2⅔	(2,2)	
Voc. or Tech. group	3		
Teaching Major and Minor	3⅓		
	18		

Sociol. 31, Sociology	2	(2,0)	
M. S. 32, Military Science	⅔	(0,2)	
Voc. Ed. 45, Teach. Science	3	(3,0)	
Voc. or Tech. group	3		
Teaching Major and Minor	4		
Free electives	5		
	17⅔		

Senior Year

Voc. Ed. 49, Health and P. Ed.	2	(2,0)	
Voc. Ed. 51, Pract. Teaching	3	(0,6)	
Voc. Ed. 59, Administration	2	(2,0)	
M. S. 41, Military Science	1	(0,3)	
Teaching Major and Minor	6		
Free electives	2		
	16		

Voc. Ed. 47, Hist. & Philos. of Education	2	(2,0)	
Voc. Ed. 52, Pract. Teaching	3	(0,6)	
M. S. 42, Military Science	⅔	(0,2)	
Teaching Major and Minor	5⅔		
Free electives	5		
	16⅓		

I TEACHING MAJORS: 1. Biological Science, including Botany, Bacteriology, and Zoology. 2. Chemistry. 3. Mathematics. 4. Physics. 5. Social Science.

II TEACHING MINORS: First Teaching Minor: One of these above not classed as major.
Second Teaching Minor: Social Science, including History, Economics.

III VOCATIONAL OR TECHNICAL GROUPS
1. Agriculture—Agronomy, Animal Husbandry, Bacteriology and Botany, Horticulture, Poultry.
2. Textiles—Textile Chemistry, Weaving and Designing, Yarn Manufacturing.
3. Engineering—Architecture, Drawing, Civil, Electrical, Mechanical.

INDUSTRIAL EDUCATION

The curriculum in Industrial Education is intended to prepare students to teach industrial subjects, industrial arts, drawing, manual training, metal work, etc., in the high schools and to supervise the teaching of evening trade classes. The four-year curriculum includes the study of the major industries of South Carolina. The freshman year includes training in textiles. Students who complete this curriculum are prepared to teach

manual training, drawing, woodwork, home mechanics, general subjects, and mathematics. A total of 140 semester hours is required for graduation. Provision is made for 14 semester hours free electives. A student may take as many as 20 hours per semester.

There has been, and is at present, an unusual demand for Clemson men trained in this field.

INDUSTRIAL EDUCATION

Freshman Year

First Semester		*Second Semester*	
Chem. 11, General ---------- 3⅔	(3,2)	Chem. 12, General ---------- 3⅔	(3,2)
Drawing 13, Engineering ----- 1⅓	(0,4)	Drawing 14, Engineering ---- 1⅓	(0,4)
English 15, Comp. & Am. Lit. ---------- 3	(3,0)	Eng. 16, Comp. & Am. Lit. --- 3	(3,0)
History 14, Am. Ec. Hist. --- 2	(2,0)	Gov. 12, Am. Gov. & Pol. Parties ---------- 2	(2,0)
Math. 17, First Year College Math. ---------- 3	(3,0)	Math. 18, First Year College Math. ---------- 3	(3,0)
M. E. 17, or 12, Shop ------- 2	(0,6)	M. E. 12, or 17, Shop ------- 2	(0,6)
M. S. 11, Military Science --- 1	(0,3)	M. S. 12, Military Science --- 1	(0,3)
Voc. Ed. 11, Orientation ----- 1	(1,0)	W. D. 12, Gen. Textiles ----- 1⅔	(1,2)
Y. M. 11, Gen. Textiles ------ 1⅔	(1,2)		
18⅔		17⅔	

Summer industrial employment minimum of four weeks.

Sophomore Year

C. E. 23, Surveying -------- 1	(1,0)	Draw. 26, El. Des. & Kin. --- ⅔	(0,2)
C. E. 23a, Surveying Field and Office Work ------- ⅔	(0,2)	Eng. 22, Lit. & Adv. Comp. -- 2	(2,0)
Draw. 25, Mechanical ------- ⅔	(0,2)	Math. 26, Industrial Math. --- 3	(3,0)
Eng. 21, Lit. & Adv. Comp. -- 2	(2,0)	M. E. 24, Machine Shop ------ 1	(0,3)
Econ. 23, Economics -------- 2	(2,0)	M. S. 22, Military Science --- 1	(0,3)
Math. 25, Industrial Math. --- 3	(3,0)	Physics 22 & 24, General ---- 5	(4,3)
M. E. 22, Mat. of Engr. ------ 2	(2,0)	Voc. Ed. 22, Intro. Voc. Ed. - 1	(1,0)
M. E. 23, Machine Shop ------ 1	(0,3)	Voc. Ed. 28, Obs. of Voc. Ind. Teaching ---------- 1	(0,3)
M. S. 21, Military Science --- 1	(0,3)	Electives ---------- 2	
Physics 21 & 23, General ---- 5	(4,3)		
18⅓		16⅔	

Summer industrial employment minimum of four weeks.

Junior Year

Voc. Ed. 33.5, Art Metal Work ---------- 2	(1,3)	Eng. 32, Business Law ------ 2	(2,0)
Eng. 31, Public Speak. ------ 2	(2,0)	M. E. 30, Welding ---------- 2	(1,3)
M. S. 31, Military Science --- 1	(0,3)	M. S. 32, Military Science --- ⅔	(0,2)
Voc. Ed. 31.6, Ind. Arts ---- 2⅔	(2,2)	Voc. Ed. 32, Org. of Courses of Study ---------- 3	(3,0)
Voc. Ed. 35, Psychol. for Teachers ---------- 3	(2,2)	Voc. Ed. 32.6, Ind. Arts ----- 2⅔	(2,2)
Voc. Ed. 61, Ind. Lab. ------ 2	(0.6)	Voc. Ed. 38, Teaching of Drawing ---------- 3	(2,2)
Voc. Ed. 39, Prin. of Sec. Ed. 3	(3,0)	Voc. Ed. 62, Ind. Lab. ----- 2	(0.6)
Electives ---------- 2		Electives ---------- 3⅔	
17⅔		19	

Senior Year

Arch. 41.5, Art Appreciation_2	(2,0)	Arch. 42.5, Ind. Arts Design_ ⅔	(0,2)
E. E. 35, Elec. Mach. _____2	(2,0)	E. E. 38, Voc. Electricity____1⅔	(1,2)
E. E. 35a, Elec. Lab. _____ ⅔	(0,2)	Arch. 36, Bldg. Constr._____2	(2,0)
*Sociol. 31, Sociology _____2	(2,0)	M. S. 42, Military Science___ ⅔	(0,2)
Arch. 35, Bldg. Constr. _____3	(3,0)	*Voc. Ed. 43, Pract. Teach._5	(0,10)
M. S. 41, Military Science___1	(0,3)	Voc. Ed. 46, Tech. of Teach._3	(3,0)
Voc. Ed. 55, Coordination Meth. in Voc. Ed._____2	(1,3)	Electives _____3-5	
Electives _____3⅓			16-18
	16		

*Offered both semesters.

TEXTILE INDUSTRIAL EDUCATION

This course has for its purpose the preparation of young men for positions of usefulness and responsibility in vocational departments of schools located in textile communities. The course includes instruction in the fundamental principles of education, engineering and the textile industry.

The prime purpose of the course is to prepare the students for positions as teachers of trade and industrial subjects and as principals of schools in mill communities as well as local supervisors of industrial education. Since the textile industry is the chief one in the state, this industry is given special prominence. The course is essentially a combination of instruction in the textile industry and the training of industrial teachers.

One hundred forty semester hours of credit are required for graduation. Fourteen semester hours of free electives are allowed.

TEXTILE INDUSTRIAL EDUCATION

Freshman Year

First Semester		*Second Semester*	
Chem. 11, General ---------- 3⅔	(3,2)	Chem. 12, General ---------- 3⅔	(3,2)
Drawing 13, Engineering ---- 1⅓	(0,4)	Drawing 14, Engineering ---- 1⅓	(0,4)
Eng. 15, Comp. & Am. Lit.--- 3	(3,0)	Eng. 16, Comp. & Am. Lit.--- 3	(3,0)
Hist. 14, Am. Ec. Hist.------ 2	(2,0)	Gov. 12, Am. Gov't. -------- 2	(2,0)
Math. 17, First Year College Math. ---------- 3	(3,0)	Math. 18, Gen. Sci. Math.---- 3	(3,0)
M. E. 17, or 12, Shop------- 2	(0,6)	M. E. 17, or 12, Shop------- 2	(0,6)
M. S. 11, Military Science--- 1	(0,3)	M. S. 12, Military Science--- 1	(0,3)
Voc. Ed. 11, Orientation ---- 1	(1,0)	W. D. 12, Gen. Textiles------ 1⅔	(1,2)
Y. M. 11, Gen. Textiles ------ 1⅔	(1,2)		
18⅔		17⅔	

Summer industrial employment minimum of four weeks.

Sophomore Year

Drawing 25, Mechanical ---- ⅔	(0,2)	Drawing 26, El. Des. & Kin.-- ⅔	(0,2)
Eng. 21, Lit. & Adv. Comp.--- 2	(2,0)	Eng. 22, Lit. & Adv. Comp.-- 2	(2,0)
M. E. 23, Machine Shop----- 1	(0,3)	M. S. 22, Military Science--- 1	(0,3)
Math. 25, Industrial Math.--- 3	(3,0)	Physics 12, General ---------- 3⅔	(3,2)
M. S. 21, Military Science--- 1	(0,3)	W. D. 22, Adv. Design ------ 2	(2,0)
Physics 11, General --------- 3⅔	(3,2)	W. D. 24, Weaving ---------- ⅔	(0,2)
W. D. 21, Elem. Design------ 2	(2,0)	*W. D. 26, Mill Problems---- 2	(2,0)
W. D. 23, Weaving ---------- ⅔	(0,2)	Y. M. 22, Cards & Draw F.-- 2⅔	(2,2)
Y. M. 21, Pickers ---------- 2⅔	(2,2)	Voc. Ed. 22, Intro. to Voc. Ed.-- 1	(1,0)
*Y. M. 24, Mill Problems ---- 2	(2,0)	Voc. Ed. 28, Observ. of Teaching ---------- 1	(0,3)
18⅔		16⅔	

Summer industrial employment minimun of four weeks.

Junior Year

Sociol. 31, Sociology --------- 2	(2,0)	Eng. 32, Business Law ------ 2	(2,0)
M. S. 31, Military Science---- 1	(0,3)	Voc. Ed. 32, Org. of Courses of Study ---------- 3	(3,0)
Voc. Ed. 39, Prin. of Sec. Voc. Ed. ---------- 3	(3,0)	M. E. 34, Mech. Engr.------- 3	(3,0)
W. D. 31, Dobby Design ----- 2	(2,0)	M. E. 34a, Mech. Engr. Lab. ⅔	(0,2)
W. D. 33, Fab. Analysis------ 1	(0,2)	M. S. 32, Military Science---- ⅔	(0,2)
W. D. 35, Fancy Loom Fixing ⅔	(0,2)	W. D. 34, Fab. Analysis------ 1	(0,2)
Y. M. 31, Rov. Frames------- 2⅔	(2,2)	W. D. 36, Fancy Loom Fixing ⅔	(0,2)
Y. M. 34, Spinning ---------- 3	(2,3)	*Y. M. 28, Cotton Grading---- ⅔	(0,2)
Electives ---------- 2		Y. M. 42, Combers ---------- 1⅔	(1,2)
17⅓		Electives ---------- 4	
		17⅓	

Senior Year

E. E. 35, Elec. Mach. ------- 2	(2,0)	M. S. 42, Military Science---- ⅔	(0,2)
E. E. 35a, Elec. Lab. ------- ⅔	(0,2)	*Voc. Ed. 43, Prac. Teach.--- 5	(0,10)
Econ. 23, Economics -------- 2	(2,0)	Voc. Ed. 46, Tech. of Teach.-- 3	(3,0)
Eng. 31, Public Speaking----- 2	(2,0)	W. D. 44, Warp Prep.------- 2	(2,0)
M. S. 41, Military Science---- 1	(0,3)	W. D. 48, Knitting ---------- ⅔	(0,2)
W. D. 43, Cost Finding------ 3	(3,0)	Y. M. 44, Mill Econ. -------- 2	(2,0)
Y. M. 43, Doubling & Draft.-- 1⅔	(1,2)	Electives ---------- 3	
Electives ---------- 5⅔		16⅓	
18			
Suggested Electives:		Suggested Electives:	
Voc. Ed. 31.6, Ind. Arts------ 2⅔	(2,2)	Voc. Ed. 32.6, Ind. Arts------ 2⅔	(2,2)
Voc. Ed. 61, Ind. Lab. ------ 2	(0,6)	Voc. Ed. 62, Ind. Lab.------- 2	(0,6)
		Econ. 24, Economics -------- 2	(2,0)

*Offered both semesters.

DESCRIPTION OF COURSES*

AGRICULTURAL ECONOMICS AND RURAL SOCIOLOGY

MR. AULL

MR. WILLIAMS MR. MILLS **MR. FULMER MR. FERRIER MR. BING

AG. EC. 22—ELEMENTARY AGRICULTURAL ECONOMICS—Semester 1 or 2 (3 and 0) 3 cr.

Purpose: To acquaint the student with the fundamental principles of Economics in their relation to Agriculture. *Principal Topics:* The students are made acquainted with the terms in general use in agricultural economics and their meaning; the factors of production, the systems of land tenure and the basic social and economic problems confronting agriculture.

MR. AULL AND STAFF

AG. EC. 32—FARM ORGANIZATION AND MANAGEMENT—Semester 2 (2 and 2) 2 2/3 cr.

Prerequisite: Ag. Ec. 22.

Purpose: To study the principles and problems involved in organizing and operating the successful farm business. *Principal Topics:* Farm organization and management; economic specialization in relation to agriculture; types of farming and the economic, physical and biological factors determining them; selection and combination of farm enterprises for highest profits; physical and financial organizations of farms, and farm operation in areas representative of the important types.

MR. FERRIER

AG. EC. 33—STATISTICAL METHODS—Semester 1 (3 and 0) 3 cr.

Prerequisite: Ag. Ec. 22.

Purpose: A course in the meaning and application of statistical methods which will train students to make ordinary statistical studies. *Principal Topics:* Sampling, tabular and graphic presentation, averages, ratios and coefficients, dispersion, the theory of probability and error, index numbers, trends, and correlation.

MR. WILLIAMS

*Below, and on the pages following, are given in alphabetical order the descriptions of courses, including the subject, catalog number, descriptive title, the purpose, and the principal topics of each course. In general, Freshman courses are numbered from 11 through 19; Sophomore, 20 through 29; Junior, 30 through 39; and Senior, 40 through 60.

**On leave.

Ag. Ec. 34—Public Finance—Semester 2 (3 and 0) 3 cr.

Prerequisite: Ag. Ec. 22, 33.

Purpose: To familiarize the student with the problems of taxation and their economic and social implications with particular reference to agriculture. *Principal Topics:* The essentials of a just and equitable tax; a critical examination of some of the more common revenue-raising measures; budgets, and public expenditures, etc. The student will be given opportunity to study in detail the relative burden of state and local taxes upon different groups of individuals. (*Public Finance*—Lutz.)

Mr. Aull

Ag. Ec. 36—Cooperation in Agriculture—Semester 2 (3 and 0) 3 cr.

Purpose: To acquaint the student with the techniques and ethics of the cooperative business method and its applications to producing, purchasing, marketing, and financing in agriculture.

Mr. Mills Mr. Bing

Ag. Ec. 40—Economic Geography—Semester 2 (3 and 0) 3 cr.

Purpose: A course for those desiring to understand the relation between geography and economic conditions, including the laws of trade. *Principal Topics:* Industrial geography, which includes the geographic, geologic, and climatic laws governing the establishment of any form of industry, all agricultural products, fish, manufacturing, and mineral resources being considered in its terms; commercial geography, which is concerned with the laws of trade and the trade routes of the world; the general influence of geologic factors on international relationship and policy is stressed. (*Industrial and Commercial Geography*—Smith.)

Mr. Mills Mr. Bing

Ag. Ec. 41—Principles of Marketing—Semester 1 (3 and 0) 3 cr.

Prerequisite: Ag. Ec. 22.

Purpose: To study problems encountered by farmers in marketing their products. Different channels of trade and types of marketing agencies are studied. *Principal Topics:* A course dealing with the principles of marketing, cooperative marketing, marketing programs, problems, services, etc.; marketing institutions and functions, market grades, and

standardization; storage, warehousing, transportation, future trading, inspection and grading of perishable and staple products with particular reference to agriculture.

Mr. Aull

Ag. Ec. 42—Rural Sociology—Semester 2 (3 and 0) 3 cr.

Prerequisite: Ag. Ec. 22.

Purpose: To study human relations as modified by life in the country. *Principal Topics:* The farm family; its food requirements; its housing, health; schooling; recreational opportunities, and the relation of the farm family to land, whether as owner or tenant.

Mr. Williams

Ag. Ec. 43—Farm Finance and Accounting—Semester 1 (3 and 0) 3 cr.

Prerequisite: Ag. Ec. 22, 32.

Purpose: (a) To analyze financial requirements of individual farmers and of farmers' marketing and purchasing organizations. (b) To understand the fundamental principles of accounting adapted to the farm business, and to make application of accounting data to farm management. *Principal Topics:* Critical study of different types and forms of accounts; actual practice in record-keeping, beginning with simple operations such as the inventory, the cash book, and ledger; analysis of credit requirements of farmers; investor and depositors as sources of credit; a study of financial institutions serving agriculture, such as farm mortgage companies, federal and joint stock land banks, immediate credit banks, livestock loan companies, national and state banks, and the federal reserve banks; principles upon which credit is extended; and the cost of credit.

Mr. Ferrier

Ag. Ec. 44—Land Economics—Semester 2 (3 and 0) 3 cr.

Prerequisite: Ag. Ec. 22, 32, and 33; Senior Standing.

Purpose: To study land as a resource, as a factor in production, and its relation to society. *Principal Topics:* A critical treatment of such subjects as land settlement and colonization, land booms and depressions, land valuation and assessment, land price movements and rents. Economic land holding and economic land utilization are studied from individual,

state, and national viewpoints. Particular attention is given to state and national land planning, rural zoning, and conservation. (*Land Economics* —Ely and Wehrwein.)

Mr. Aull

Ag. Ec. 46—Farmers' Movements—Semester 2 (3 and 0) 3 cr.

Prerequisite: Ag. Ec. 22.

Purpose: To give the student a view of the efforts of farmers to organize for the improvement of agriculture and other rural concerns. *Principal Topics:* Beginning with the first local agricultural society, the development of this movement is followed through the period of the Civil War. After 1865, the Grange, Farmers' Alliance, etc., are studied in their chronological order.

Mr. Mills

Ag. Ec. 51, 52—Seminar—Semesters 1 and 2 (1 and 0) 1 cr. each semester.

Prerequisite: Senior standing and major in Agricultural Economics.

Purpose: To acquaint the student with the relation of economics and sociology to specific problems. *Principal Topics:* Each student will select some problem for intensive study, and the various problems selected will be discussed in their relation to each other and to the current situation.

Mr. Aull and Staff

AGRICULTURAL ENGINEERING

Mr. Nutt Mr. Jones

Ag. Engr. 22—Farm Machinery—Semester 2 (2 and 2) 2 2/3 cr.

Purpose: To give theoretical and practical training in the operation of modern farm equipment. *Principal Topics:* Construction, operation, requirements and utilization of tillage, seeding, cultivating, harvesting and belt-operated farm machinery. (*Farm Machinery and Equipment*—Smith.)

Mr. Nutt Mr. Jones

Ag. Engr. 23—Agr. Mechanics—Semester 1 (2 and 3) 3 cr.

Purpose: To give the theoretical and practical application of the mechanics pertaining to agriculture. *Principal Topics:* Soldering, cement work, rope work, belts, pulleys and laces, leather work, pipe fitting, painting, wood finishing, and glazing. (*Mechanical Training*—Boss, Dent, and White.)

Mr. Nutt Mr. Jones

Ag. Engr. 35—Motors and Power Machinery—Semester 1 (2 and 3) 3 cr.

Purpose: To give to the student theories of operation, construction, and utilization of internal combustion engines. *Principal Topics:* History of the internal combustion engine, nomenclature and definitions, principles of operation, power and its measurement, and gas engine troubles. (*Farm Gas Engines and Tractors*—Jones.)

Mr. Nutt

Ag. Engr. 38—Soil Conservation—Semester 2 (1 and 3) 2 cr.

Purpose: To provide a less technical course in terracing and drainage for students majoring in Agricultural Education and those majoring in any field of agriculture other than Agricultural Engineering. *Principal Topics:* Elementary surveying, prevention of soil erosion, with equal emphasis on terracing, design, and study of drainage systems. (*Soil Conservation*—Ayres.)

Mr. Nutt

Ag. Engr. 43—Water Supply and Sanitation—Semester 1 (2 and 2) 2 2/3 cr.

Purpose: To give the theoretical and practical applications of water supply and sanitation as it is applied in rural homes and communities. *Principal Topics:* Water systems, pumping machinery, plumbing fixtures, sewage disposal systems, water purification systems.

Mr. Jones

Ag. Engr. 45—Farm Buildings—Semester 1 (1 and 3) 2 cr.

Prerequisite: Drawing 25 and 28.

Purpose: To assist students in the design and construction of farm buildings. *Principal Topics:* Properties of farm building materials, prin-

ciples of concrete construction, essentials and design of typical structures, wood preservatives, specification, cost estimating, and farmstead sanitation. (*Farm Buildings*—Scoates.)

Mr. Nutt

Ag. Engr. 46—Advanced Farm Buildings—Semester 2 (1 and 3) 2 cr.

Prerequisite: Ag. Engr. 45.

Purpose: A continuation of Agricultural Engineering 45. *Principal Topics:* A more detailed study of construction, design, and cost estimation of farm buildings. (*Farm Buildings*—Scoates.)

Mr. Nutt

Ag. Engr. 48—Advanced Farm Machinery Laboratory—Semester 2 (0 and 3) 1 cr.

Prerequisite: Ag. Engr. 22.

Purpose: To provide advanced practical training for students in the School of Agriculture whose major is Agricultural Engineering. *Principal Topics:* Testing and adjusting of tractors, seeding, cultivating, harvesting and belt-operated farm equipment.

Mr. Nutt

Ag. Engr. 49—Surveyage and Drainage—Semester 1 (2 and 3) 3 cr.

Purpose: To fulfill the need of instruction dealing with drainage, terracing, reclamation, and surveying problems pertaining to farms. *Principal Topics:* Elementary surveying, design and study of drainage systems, prevention of soil erosion, with special emphasis on terracing, land reclamation, and the use of explosives. (*Soil Conservation*—Ayres.)

Mr. Nutt

Ag. Engr. 51 & 52—Introduction to Research and Thesis—Semesters 1 and 2 (0 and 3) 1 cr.

Purpose: To teach the student how to attack and solve a research problem. *Principal Topics:* A suitable problem is assigned each student. The results of the study are presented in thesis form.

Mr. Nutt Mr. Jones

AGRONOMY

MR. COOPER

MR. COLLINGS MR. PATRICK MR. LIPSCOMB MR. JONES

AGR. 11—FIELD CROPS—*Semester* 1 (3 and 0) 3 cr.

Purpose: To give the student a fundamental course in general field crops. *Principal Topics:* Origin, history, botanical characteristics, physiology, ecology, varieties, breeding, soil adaptation, fertilizer requirements of the most important crops of the United States and the cultural methods employed in their production. (*Production of Field Crops*—Huchinson, Wolfe and Kipps.)

MR. COLLINGS MR. LIPSCOMB

AGR. 20—SOILS—Semester 2 (2 and 2) 2 2/3 cr.

Purpose: To give the student a fundamental course in soils. *Principal Topics:* Basic principles of soil physics, soil fertility, soil biology, and soil management. The study deals with the soil as a reservoir for water; a medium for root development, a source of nutrients, and a home of organisms. (*The Nature and Properties of Soils*—Lyon and Buckman.)

MR. COLLINGS MR. JONES

AGR. 31—FERTILIZERS AND MANURES— Semester 1 (2 and 0) 2 cr.

Prerequisite: Agr. 20.

Purpose: To give the student a thorough knowledge of the sources, characteristics, and uses of fertilizers and manures. *Principal Topics:* Sources, mining and manufacturing, composition, physical characteristics, and use of fertilizers and manures. (*Commercial Fertilizers—Their Sources and Use*—Collings.)

MR. COLLINGS

AGR. 32—GENETICS—Semester 2 (2 and 2) 2 2/3 cr.

Purpose: To instruct students in the basic principles of genetics. *Principal Topics:* Heredity and variation, laws of heredity, application of genetic principles of plant and animal improvement. (*Principles of Genetics*—Sinnott and Dunn.)

MR. COOPER MR. LIPSCOMB MR. JONES

AGR. 33—FORAGE CROPS—Semester 1 (3 and 0) 3 cr.

Prerequisite: Agr. 11.

Purpose: To give the student a thorough knowledge of the botanical characteristics, cultural practices employed, and utilization of the leading forage plants of the United States. *Principal Topics:* The origin and adaptation of forage crops, methods of production; treatment of pastures, meadows, etc., and an intensive study of the leading forage plants with special emphasis given to those adapted to South Carolina conditions. (*Forage Plants and Their Culture*—Piper; *Growing Pastures in the South*—Combs.)

MR. JONES

AGR. 42—SOIL FERTILITY AND MANAGEMENT—Semester 2 (2 and 0) 2 cr.

Prerequisite: Agr. 20 and Agr. 31.

Purpose: A detailed study of soil composition and practices of soil management. *Principal Topics:* Composition of the soil, influence of crop rotations and fertilizers on soil productivity, influence of various methods of tillage on crop yields, and a general study of those factors essential for the practical utilization of South Carolina soils. (*Soil Management*—Bear.)

MR. COLLINGS

AGR. 43—FARM PROBLEMS—Semester 1 (2 and 0) 2 cr.

Purpose: To familiarize the student with the practical problems confronted under various conditions that exist in different sections of South Carolina. *Principal Topics:* The problems to be taken from experiences of farmers, county agents, and specialists in adjusting farm practices to varying conditions of organization, soil types, and climate.

MR. PATRICK

AGR. 44—ADVANCED SOIL LABORATORY—Semester 2 (0 and 2) 2/3 cr.

Prerequisite: Agr. 20.

Purpose: To develop laboratory technique and to make students proficient in making physical and chemical determinations of soils. *Principal Topics:* Mechanical analysis, determinations of volume weight, soil water, organic matter, nitrogen, phosphoric acid, and potash. (*Soil Characteristics*—Emerson.)

MR. COLLINGS

Agr. 45—Crop Nutrition—Semester 1 (2 and 0) 2 cr.

Prerequisite: Agr. 11.

Purpose: To give the student a comprehensive knowledge of the geographical distribution, soil and fertilizer requirements of important farm crops. *Principal Topics:* Economic importance and climatic requirements of various crops; important soil factors influencing crop production, and the nutrient requirements of crops. (*The Small Grains*—Carlton; and *The Corn Crop*—Montgomery.)

Mr. Cooper

Agr. 47—Advanced Crop Laboratory—Semester 1 (0 and 2) 2/3 cr.

Purpose: To give advanced students detailed information on important agronomic problems. *Principal Topics:* Experimental methods used in agronomy, morphological characters, classification, and yielding capacity of important varieties of various farm crops. (*Bulletins and Periodicals.*)

Mr. Lipscomb

Agr. 49—Plant Breeding—Semester 1 (2 and 2) 2 2/3 cr.

Prerequisite: Agr. 32.

Purpose: To present the application of the basic principles of genetics in the improvement of crop plants. *Principal Topics:* Biometrical methods, field plat technique, modes of reproduction of plants and methods of improving various crop plants. (*Breeding Crop Plants*—Hayes and Garber.)

Mr. Lipscomb Mr. Jones

Agr. 51—Seminar—Semester 1 (1 and 0) 1 cr.

Purpose: To consider agronomic topics of special interest in crop production. *Principal Topics:* Material occurring in current numbers of professional journals and bulletins.

Mr. Cooper

Agr. 52—Seminar—Semester 2 (1 and 0) 1 cr.

Purpose: To give the student the latest published and unpublished information concerning recent developments in the field of soil science. *Principal Topics:* Topics taken from latest published bulletins, reports, and professional magazines.

Mr. Collings

AGR. 53—COTTON—Semester 1 (2 and 0) 2 cr.

Prerequisite: Agr. 11.

Purpose: To give the student a thorough knowledge of all phases of cotton production. *Principal Topics:* History, morphology, physiology, varieties, methods of cultivation, fertilization, insect and disease control, breeding, harvesting and grading of American Upland cotton. (*The Production of Cotton*—Collings.)

MR. COLLINGS

AGR. 61, 62—INTRODUCTION TO RESEARCH AND THESIS—Semesters 1 and 2 (0 and 3) 1 cr.

Purpose: To teach the student how to attack and solve a research problem. *Principal Topics:* A suitable problem is assigned each student. The results of the study are presented in thesis form.

AGRONOMY STAFF

ANIMAL HUSBANDRY

MR. STARKEY MR. RITCHIE

A. H. 12—TYPES, BREEDS AND MARKET CLASSES OF LIVESTOCK—Semesters 1 and 2 (2 and 2) 2 2/3 cr.

Purpose: To give the agricultural students a knowledge of the characteristics and uses of farm animals. *Principal Topics:* Types, breeds, and market classes of beef cattle, horses, mules, sheep, and swine. In laboratory, the judging of farm animals is given considerable emphasis. (*Types and Market Classes of Livestock*—Vaughan.)

MR. RITCHIE

A. H. 31—FEEDS AND FEEDING—Semester 1 (3 and 0) 3 cr.

Prerequisite: A. H. 12 and Chemistry 21.

Purposes: To give the student an understanding of the principles of feeding farm animals. *Principal Topics:* A study of nutrients, digestion, metabolism of feed stuffs, nutritive ratios, feeding standards, and the balancing of rations. (*Feeds and Feeding*—Henry and Morrison.)

MR. MORGAN

A. H. 33—Judging—Semester 1 (0 and 2) 2/3 cr.

Prerequisite: A. H. 12.

Purpose: To give advanced students an opportunity to become more proficient in judging livestock. *Principal Topics:* Judging cattle, horses, mules, sheep and swine. Classes of livestock are studied and placed, and reasons given for the placings.

Mr. Starkey Mr. Ritchie

A. H. 34—Pork Production—Semester 2 (2 and 2) 2 2/3 cr.

Prerequisite: A. H. 31.

Purpose: To give the students a thorough knowledge of the fundamentals of pork production. *Principal Topics:* Feeding and management of hogs at different weights and ages. Forage crops, protein supplements, preparation of feeds, methods of feeding, relative value of feeds, summer and winter management, buying, and selling. (*Pork Production*—Smith.)

Mr. Starkey

A. H. 35—Farm Meats—Semester 1 (0 and 6) 2 cr.

Prerequisite: A. H. 12.

Purpose: The proper selection and killing of meat animals and the cutting and curing of farm meats. *Principal Topics:* Production, selection, slaughtering, cutting, curing, judging, and consumption of farm meats. (*Meat and Meat Products*—Tomhave.)

Mr. Ritchie

A. H. 40—Animal Breeding—Semester 2 (2 and 2) 2 2/3 cr.

Prerequisite: Dairy 32 or Agronomy 32.

Purpose: To give the student an understanding of the fundamental principles relative to the breeding and improvement of livestock. *Principal Topics:* Variation, heredity, selection, linebreeding, in-breeding, cross-breeding, breed analysis, and other correlated subjects. (*Breeding and Improvement of Farm Animals*—Rice.)

Mr. Starkey

A. H. 41—Advanced Feeds and Feeding—Semester 1 (2 and 0) 2 cr.

Prerequisite: A. H 31.

Purpose: To give the student a knowledge of the relative values of the different feeds used in livestock production, to study the nutrient requirements of the different classes of livestock, to become familiar with the digestible nutrients in our most common feeds, and to balance rations for all classes of livestock. (*Feeds and Feeding*—Henry and Morrison.)

Mr. Starkey

A. H. 42—Horse and Sheep Production—Semester 2 (2 and 2) 2 2/3 cr.

Prerequisite: A. H. 31.

Purpose: To give the students training relative to the feeding and management of horses and sheep. *Principal Topics:* Feeding, breeding, management, judging, shearing, blocking, and sanitation. (*Productive Sheep Husbandry*—Coffey.)

Mr. Starkey

A. H. 43—Beef Production—Semester 1 (2 and 2) 2 2/3 cr.

Prerequisite: A. H. 31.

Purpose: To familiarize the student with the principles of breeding, feeding, and management of beef cattle in the United States and foreign countries. *Principal Topics:* Early history of beef production, beef production in foreign countries, relation of beef production to general farming, most profitable feeds for beef production, methods of breeding to improve beef cattle, management of the purebred herd. (*Beef Production*—Snapp.)

Mr. Starkey

A. H. 52—Seminar—Semester 2 (2 and 0) 2 cr.

Prerequisite: A. H. 31.

Purpose: To teach the student how to make use of the library and to keep informed concerning the latest findings of the experiment stations. *Principal Topics:* Timely topics are selected which have a bearing on the work which is being conducted at the various experiment stations. Each student summarizes the data on his particular problem and presents it to the group taking the course.

Mr. Starkey

ARCHITECTURE

MR. LEE

MR. ANDERSON MR. FITZPATRICK MR. HODGE

ARCH. 11, 12—ELEMENTS OF ARCHITECTURE—Semester 1 (0 and 6) 2 cr. Semester 2 (0 and 4) 1 1/3 cr.

Purpose: To give the beginner in Architecture an accurate picture of the profession he has elected, and basic training in drafting and design. *Principal Topics:* Exercises in proper drafting methods. An understanding of the use of the orders in architecture. The design, planning and construction drawings of a small building. Training in presentation of work. Lectures on the duties of an architect.

MR. FITZPATRICK

ARCH. 13, 14—FREEHAND DRAWING—Semesters 1 and 2 (0 and 4) 1 1/3 cr.

Purpose: To give the student a thorough working knowledge of the principles of both angular and parallel perspective—the perspective of circles and shading. *Principal Topics:* Study of mass, form, proportion, and value with the mediums of pencil and charcoal. A sketching technique is stressed.

MR. HODGE

ARCH. 15—DESCRIPTIVE GEOMETRY—Semester 1 (0 and 2) 2/3 cr.

Purpose: To develop the powers of visualization and imagination. *Principal Topics:* Points, lines, planes, intersections, and sections. Solutions on drafting board. (*Practical Descriptive Geometry*—D. A. Low.)

MR. FITZPATRICK

ARCH. 16—SHADES AND SHADOWS AND PERSPECTIVE—Semester 2 (0 and 2) 2/3 cr.

Prerequisite: Architecture 15.

Purpose: To create in the student's mind correct form and proportion by application of conventional shades, shadows, and principles of perspective. *Principal Topics:* Drafting board practice in casting of Shades and Shadows on architectural forms and principles of architectural perspective. (*Shades and Shadows for Architects*—Buck, Ronan and Oman.)

MR. FITZPATRICK

ARCH. 21—ARCHITECTURAL DESIGN—Semester 1 (0 and 14) 4 2/3 cr.

Prerequisite: Arch 12, 14, 15, 16.

Purpose: To introduce the student by means of analytical problems to the basic principles of design inherent in the smaller elements of architecture. *Principal Topics:* Proportions; relative values of three dimensional mass; relation of lesser elements and decorative detail to the larger forms, in respect to mass and pattern; design of windows, doors, porticoes, arches; the Orders, together with analysis of detail of mouldings, carried out in rendered problems of from two to five weeks duration. Rendering: building out of masses, focus of attention.

MR. ANDERSON

ARCH. 22—ARCHITECTURAL DESIGN—Semester 2 (0 and 14) 4 2/3 cr.

Prerequisite: Arch. 21.

Purpose: Continuation of Arch. 21, with a gradual working toward small problems in planning in preparation for Arch. 31. *Principal Topics:* Continuation of Arch. 21; planning as a problem in three dimensional space; elementary exercises in spatial requirements of windows, doors, stairs, roofs, bath rooms, closets, fireplaces, etc., carried out in rendered problems of from two to five weeks duration.

MR. ANDERSON

ARCH. 23, 24—ANTIQUE AND COLOR—Semesters 1 and 2 (0 and 3) 1 cr.

Prerequisite: Arch. 14.

Purpose: To give a thorough drill in the drawing of simple casts of architectural fragments, parts of the figure, and still life groups. *Principal Topics:* Elements of decorative composition, still life groups in monochrome and color. Outdoor sketching—sketching in water-color, pastel, and charcoal.

MR. HODGE

ARCH. 23.5, 24.5—DECORATIVE DESIGN AND COLOR—Semesters 1 and 2 (0 and 3) 1 cr.

Prerequisite: Arch. 14.

Purpose: To give the student majoring in Weaving and Designing the fundamentals of form, shade, and color underlying the design of decorative textiles. *Principal Topics:* Pencil sketching, charcoal drawing

from models, casts and nature, adaptation of natural and conventional forms to decorative design as applied to textile fabrics, study of color in theory and practice, and water-color renderings.

Mr. Hodge

Arch. 25—History of Architecture—Semester 1 (4 and 0) 4 cr.

Purpose: To acquaint the student with the development of architecture, from prehistoric to mediaeval time, as a problem both of construction and aesthetics. *Principal Topics:* Influence of various geographic, geological, social, and psychological factors; structural problems and their solution, post and lintel, arch, vault, pendentive, dome; planning problems and their solution; temples, churches, public buildings; decorative problems and their solution, as revealed in the buildings of the Egyptian, Greek, Roman, Early Christian, Byzantine, and Romanesque periods.

Mr. Anderson

Arch. 25.5—Architecture of Antique and Early Christian Civilizations—Semester 1 (2 and 0) 2 cr.

Purpose: An elective course to present, as cultural background, a brief, non-technical synopsis of architecture as it developed in the earlier civilizations of Western Europe. *Principal Topics:* While in general this course covers the material of Arch. 25, the lectures will be less concentrated and will be given from the lay rather than the architectural point of view. Emphasis will be placed not on specific buildings, but on types of buildings evolved by the different civilizations. Architecture in the Egyptian, Greek, Roman, and Early Christian civilizations.

Mr. Anderson

Arch. 26—History of Architecture—Semester 2 (4 and 0) 4 cr.

Prerequisite: Arch. 25.

Purpose: To acquaint the student with the development of architecture, from mediaeval to modern time, as a problem both of construction and aesthetics. *Principal Topics:* Influence of various geographic, geological, social, and psychological factors; the spread of the Romanesque system of building through Western Europe, and its crystallization in Gothic architecture; the revival of Classic form in Italy during the Renaissance; the spread of the Renaissance into France and England; nineteenth century eclecticism, and the beginnings of modern architecture.

Mr. Anderson

ARCH. 26.5—ARCHITECTURE OF MEDIAEVAL AND RENAISSANCE CIVILIZATIONS—Semester 2 (2 and 0) 2 cr.

Purpose: An elective course to present, as cultural background, a brief, non-technical synopsis of architecture as it developed in the later civilizations of Western Europe. *Principal Topics:* Architecture of the mediaeval and renaissance civilizations of Italy, France and England. No prerequisite is required, but inasmuch as the forms of both mediaeval and renaissance architecture are either wholly or in part rooted in earlier developments, the first half-dozen lectures will be devoted to these before proceeding with the material of the course.

MR. ANDERSON

ARCH. 28—SUMMER WORK—6 Weeks.

Purpose: To give the student an insight into the practical side of the profession, a better appreciation of the objectives in his college work and to enable him to secure better employment upon graduation. *Principal Topics:* Any duties connected with an architect's office or on construction work with a contractor, or making measured drawings of some building of good architectural character approved by the faculty of architecture. The student is expected to do this without remuneration if necessary.

ARCH. 31, 32—ARCHITECTURAL DESIGN—Semesters 1 and 2 (0 and 22) 7 1/3 cr.

Prerequisite: Arch. 22.

Purpose: To acquaint the student with problems involving planning, elevation, and mass composition in all styles of architecture. *Principal Topics:* The formal plan problem of public buildings; studies in entourage, elements of landscape architecture with relation to plan and elevation, interior architecture, indication, and presentation. The esquisse-esquisse.

MR. FITZPATRICK MR. ANDERSON

ARCH. 31a—THEORY OF ARCHITECTURE—Semester 1—(Given jointly as part of Arch. 31.)

Prerequisite: Registration in Architecture 31.

Purpose: An open period where all topics relating to architecture are brought up for discussion. Seminar. *Principal Topics:* Formal discussion of the theory of design; axial relationships, mosaic, circulation, requirements of type buildings; informal discussion of new theories of design and style; competitions and exhibitions.

MR. FITZPATRICK

ARCH. 33, 34—CAST DRAWING—Semesters 1 and 2 (0 and 3) 1 cr.

Prerequisite: Arch. 24.

Purpose: An advanced course in the representation of antique sculpture to show the elements of anatomy and its relation to form. *Principal Topics:* Drawing from casts with a choice of mediums such as charcoal, conte, pastel, etc.; outdoor sketching in pencil and water-color.

MR. HODGE

ARCH. 33.5—DECORATIVE DESIGN AND COMPOSITION—Semester 1 (0 and 3) 1 cr.

Prerequisite: Arch. 24.5.

Purpose: To give the student majoring in Weaving and Designing advanced training in the composition of textile patterns. *Principal Topics:* Composition of border patterns; geometric bases for all-over repeating designs; designing for damasks, brocades, tapestries, rugs, etc.

MR. HODGE

ARCH. 35, 36—BUILDING CONSTRUCTION—Semester 1 (3 and 0) 3 cr. Semester 2 (2 and 0) 2 cr.

Purpose: To give the student a knowledge of the materials used in the construction of a frame building, their qualities and uses. *Principal Topics:* Growth of wood, house framing, roofing, door and window details, flooring, plastering, interior and exterior finish, painting, chimney construction, hardware, estimating, specification writing, problems in calculation. (*Materials and Methods of Architectural Construction*—Gay and Parker.)

MR. LEE

ARCH. 37, 38—WORKING DRAWINGS—Semesters 1 and 2 (0 and 2) 2/3 cr.

Prerequisite: Architecture 32.

Purpose: The student is required to make complete working drawings of a frame building just as the practicing architect does in his office. *Principal Topics:* Scale drawings of plan of each floor, foundation and roof; elevation of each side of building; large scale details of framing, doors, windows, trim, stairs, cornice, roof and chimney; calculations; tracing, blueprinting.

MR. LEE

ARCH. 39—HISTORIC ORNAMENT—Semester 1 (0 and 2) 2/3 cr.

Prerequisite: Arch. 22, 24, 26.

Purpose: To acquaint the student with the development, from prehistoric to modern time, of architectural ornament. *Principal Topics:* Carved and painted ornament; mosaic pavements; painted wall decoration; stained glass, a decoration of vaults and ceilings; interior decoration; as developed in Egyptian, Greek, Roman, Mediaeval, and Renaissance architecture. After a brief analysis of each phase, the student is required to submit a small rendered plate of the particular ornament under consideration.

MR. ANDERSON

ARCH. 40, 49—LIFE DRAWING—Semesters 1 and 2 (0 and 2) 2/3 cr.

Prerequisite: Arch. 34.

Purpose: To acquaint the student with the proportion and anatomy of the nude and draped figure. Designed primarily for architectural students. *Principal Topics:* Quick sketches of the nude for action and movement. Longer studies of the nude and draped figure for tone values, composition, and light effects. Charcoal as a medium.

MR. HODGE

ARCH. 40.5—HISTORY OF PAINTING—Semester 2 (2 and 0) 2 cr.

Prerequisite: Junior or Senior Standing.

Purpose: Stressing the appreciation of painting through the various national styles. *Principal Topics:* Pre-historic painting; Egyptian and Greek painting; the Renaissance in Italy, the Netherlands, and France; the German, Spanish, English, and American schools; the International style and abstract art; illustrated with slides and mounted reproductions. (*University Prints.*)

MR. FITZPATRICK

ARCH. 41, 42—ARCHITECTURAL DESIGN—Semester 1 (0 and 20) 6 2/3 cr. Semester 2 (0 and 21) 7 cr.

Prerequisite: Arch. 32.

Purpose: To present architectural problems of an advanced nature. *Principal Topics:* The complex plan, multi-storied elevation, elements of

civic planning, advanced archaeology problems, the esquisse-esquisse, advanced landscape architecture.

Mr. Anderson

Arch. 41.5—Art Appreciation—Semester 1 (2 and 0) 2 cr.

(For students in Industrial Education—Elective).

Purpose: To cultivate in the student an artistic taste and to direct and instruct it by bringing him in contact with the best examples. *Principal Topics:* Periods and styles of architecture, painting, sculpture, furniture, ornament, decorative and interior composition, given by lectures and lantern slides.

Staff

Arch. 42.5—Industrial Design—Semester 2 (0 and 2) 2/3 cr.

(For students in Industrial Education).

Prerequisite: Drawing 12 and 14, Architecture 41.5.

Purpose: To give the students the fundamentals in design of simple pieces of furniture as worked out on the drafting table. *Principal Topics:* Working detail drawings of chairs, tables, metal work, etc.

Mr. Lee

Arch. 43, 44—Building Construction—Semesters 1 and 2 (3 and 0) 3 cr.

Prerequisite: Arch. 36.

Purpose: To give the student a working knowledge of the nature, quality, and uses of materials in a masonry building. *Principal Topics:* Foundations, mortars, details of masonry construction, steel, concrete, fireproof construction, estimates, specifications, superintendence, calculations.

Mr. Lee

Arch. 45, 46—Structural Design—Semester 1 (0 and 6) 2 cr. Semester 2 (0 and 8) 2 2/3 cr.

Prerequisite: Architecture 38.

Purpose: To train the student to make working drawings of a masonry building with specifications, including mechanical plant, as usually

prepared in the practicing architect's office. *Principal Topics:* Scale drawings of all floor plans and elevations, cross sections; large scale details of all parts of the construction with necessary calculations; specification writing, estimating; completed documents are to be in approved shape so that they may be submitted to a contractor for a bid.

Mr. Lee

Arch. 47—Mechanical Plant—Semester 1 (2 and 0) 2 cr.

Prerequisite: Architecture 38.

Purpose: To familiarize the student with the design and requirements of heating, lighting and sanitary systems in a building. *Principal Topics:* Hot air, hot water, and steam systems of heating; ventilation, electric lighting, plumbing for supply and drainage. Layout of these systems is required on drawings made in Architecture 38 or 45.

Mr. Lee

Arch. 48—Professional Practice—Semester 2 (1 and 0) 1 cr.

(For seniors in Architecture only).

Purpose: To familiarize the student with methods of practice of architecture and inculcate in him the high ethical ideals of the profession. *Principal Topics:* Office management and organization, laws, codes, contracts, ethics, competitions; documents of the American Institute of Architects are studied.

Mr. Lee

Arch. 51, 52—Advanced Architectural Design—Semesters 1 and 2 (credits to be arranged with instructor).

Prerequisite: Arch. 42.

Purpose: A continuation of Arch. 42 with more advanced work, as an elective to advanced students having the prerequisite. *Principal Topics:* The student writes his own program of the project. Scheduled criticism periods and personal presentation to the architectural faculty for judgment at the end of each semester.

Mr. FitzPatrick

Arch. 53—Modeling—Semester 1 (0 and 2) 2/3 cr.

Prerequisite: Arch. 12, 14, 15, 16.

Purpose: To give the student studies in three dimensional representation in a plastic medium. *Principal Topics:* Bas-relief placques, the human figure in relief and in the round, decorative compositions in bas-relief and in the round, advanced anatomy of the human figure, and animal forms.

Mr. Hodge

BACTERIOLOGY

Mr. Aull

Bact. 31—General Bacteriology—Semester 1 (2 and 4) 3 1/3 cr.

Prerequisite: Botany 13 and 14, Chemistry 11 and 12. (*Suggested:* Chemistry 21, or Chemistry 25 and 26.)

Purpose: To give the student a clear working knowledge of the fundamentals of bacteriology. *Principal Topics:* Morphology, classification, distribution, cultivation, observation, and physiology of microorganisms; effects of organisms on their environment; microorganisms and health. (*Bacteriology*—Tanner; *Laboratory Technique in Bacteriology*—Levine.)

Mr. Aull

Bact. 40—Dairy Bacteriology—Semester 2 (2 and 3) 3 cr.

Prerequisite: Bacteriology 31.

Purpose: To give the student a detailed knowledge of bacteriology in its relation to the dairy industry. *Principal Topics:* Bacterial counts on milk, milk fermentations, contamination of milk and cream, reducing the contamination of milk, growth of microorganisms in milk and cream, body cells in milk, spread of diseases through milk and its derivatives; preservation of milk and cream, milk enzymes, bacteriology of prepared milks, ice cream, butter cultures, fermented milks, butter, cheese, tests for the quality of milk and cream. (*Dairy Bacteriology*—Hammer; *Standard Methods of Milk Analysis and Mimeographed Notes.*)

Mr. Aull

Bact. 42—Sanitary Bacteriology—Semester 2 (2 and 3) 3 cr.

Prerequisite: Chemistry 11 and 12.

Suggested: Botany 13 or 14 and Organic Chemistry.

Purpose: This course is designed primarily for Engineering students. After a consideration of the fundamentals of bacteriology, the course is designed to give a knowledge of the relation of bacteriology to water purification and sewage disposal. *Principal Topics:* Morphology, classification, physiology, and cultivation of microorganisms; the bacteria in natural waters, the location and protection of water supplies, water borne diseases, algae and their relation to water supplies, the Colon-Typhoid group of bacteria, the bacteriological examination of water and sewage, the purification of water, operation of control laboratories, bacteriological control of swimming pools, the bacteriology of sewage and sewage effluents and methods of sewage disposal. (*Elements of Water Bacteriology*—Prescott & Winslow; *Water Purification Control*—Hopkins; *Lectures and Technical Papers; Standard Methods for the Examination of Water and Sewage of the A. P. H. A.* and *Mimeographed Notes.*)

Mr. Auli

Bact. 44—Soil Microbiology—Semester 2 (2 and 3) 3 cr.

Prerequisite: Bacteriology 31.

Purpose: To give the student accurate knowledge of the importance of microorganisms in the maintenance of soil fertility. *Principal Topics:* The soil and the plant, the microbe and its activities, the soil population, the role of microbes in the decomposition of organic substances, transformation of nitrogen, transformation of mineral substances in soil by the action of microorganisms, interrelationships between higher plants and soil microorganisms, modification of the soil population, importance of microbes in soil fertility. (*Principles of Soil Microbiology*—Waksman.)

Mr. Auli

BOTANY

Mr. Armstrong

Mr. Rosenkrans Mr. Rice Mr. MacLachlan

Bot. 11—General Botany—Semester 1 (2 and 4) 3 1/3 cr.

Purpose: To give a general survey of the principles manifest in the life of plants. *Principal Topics:* The first part of the semester is de-

voted to a study of the form, structure, and physiology of the higher plants, followed by a study of algae, bacteria, fungi, liverworts, mosses, and ferns, with the application of the biological laws. Descriptions, life histories and adaptation of the representative organisms are considered. This course is designed for General Science students.

Mr. Rosenkrans Mr. Rice Mr. MacLachlan

Bot. 13—Agricultural Botany—Semester 1 (2 and 2) 2 2/3 cr.

Purpose: To give the students knowledge of the different plant organs and their uses. *Principal Topics:* The structure and functions of the various parts of the higher seed plants and the broad principles of metabolism, growth, and reproduction are first taken up, followed by a study of the lower organisms.

Mr. Rosenkrans Mr. Rice Mr. MacLachlan

Bot. 14—Agricultural Botany—Semester 2 (2 and 4) 3 1/3 cr.

A continuation of course 13, dealing with the changes in form, structure, and methods of reproduction from the lower to the higher forms of plants. The latter part of the semester is devoted to practice work in plant identification. (*Field, Forest, and Garden Botany*—Gray.)

Mr. Rosenkrans Mr. Rice Mr. MacLachlan

Bot. 16—General Botany—Semester 2 (2 and 4) 3 1/3 cr.

Purpose: To make the students familiar with the application of biological laws; and descriptions, life, histories and adaptations of representative organisms. *Principal Topics:* The structure and functions of the various parts of the higher seed plants, and the broad principles of metabolism, growth, and reproduction are first discussed, followed by a study of the lower organisms. The practical work will consist of laboratory studies illustrating the more important phases of the theoretical work. This course is designed for students in Agricultural Education.

Mr. Rosenkrans Mr. Rice Mr. MacLachlan

Bot. 30—Plant Physiology—Semester 2 (2 and 4) 3 1/3 cr.

Prerequisite: Botany 11 or 13; one year of Chemistry, and one semester of Physics.

Purpose: To study all the relations and processes which have to do with the maintenance, growth, and reproduction of plants. *Principal*

Topics: Absorption of matter and energy, water relations of the plant, utilization of reserve products and liberation of energy, growth, movement, and reproduction.

MR. ARMSTRONG

BOT. 41—FIELD CROP DISEASES—Semester 1 (2 and 2) 2 2/3 cr.

Prerequisite: Botany 11 or 14; suggested Botany 30.

Purpose: To give a knowledge of the common field crop diseases and methods for their control. *Principal Topics:* Historical background, fungicides, insects as disseminators of disease, types of organisms causing disease, symptoms, effect upon host plants, and control of the common field crop diseases.

MR. ARMSTRONG

BOT. 43—ORCHARD AND TRUCK CROP DISEASES—Semester 1 (2 and 2) 2 2/3 cr.

Prerequisite: Botany 11 or 14; suggested Botany 30.

Purpose: To study the diseases of fruits and vegetables, and methods for their control. *Principal Topics:* Historical background, fungicides, insects as disseminators of disease, symptoms, effect upon host plants, and control of diseases of fruits and vegetables. (*Manual of Vegetable Garden Diseases*—Chupp; *Manual of Fruit Diseases*—Hesler and Whetzel.)

MR. ARMSTRONG

BOT. 45—PLANT PATHOLOGY—Semester 1 (2 and 2) 2 2/3 cr.

Prerequisite: Botany 11 or 14 or 16.

Purpose: To acquaint the student with the major plant diseases of the South. *Principal Topics:* Plant diseases, symptoms of the diseases, the nature of the causal agencies or factors, and methods of control. (*Introduction to Plant Pathology*—Heald.)

MR. MACLACHLAN

BOT. 101—MORPHOLOGY OF THE FUNGI—Semester 1 (2 and 2) 2 2/3 cr. (Hours to be arranged.)

Prerequisite: Botany 13 and 14.

A study of the morphology and taxonomy of the fungi with practice in pure culture isolation and growth of parasitic forms.

MR. ARMSTRONG

CHEMISTRY

*Mr. Brackett

Mr. Lippincott	Mr. Mitchell	Mr. Pollard
Mr. Hunter	Mr. Carodemos	Mr. zurBurg
Mr. Hodges	Mr. Gee	Mr. Hawkins

Chem. 11, 12—General Chemistry—Semesters 1 and 2 (3 and 2) 3 2/3 cr.

Purpose: To give the student a general knowledge of the fundamentals of the science of chemistry, through lectures, lecture experiments, and laboratory exercises. *Principal Topics:* A consideration of the basic laws of chemistry and a study of the preparation and properties of the common substances. (*An Introduction to College Chemistry*—Briscoe; *Laboratory Manual, Exercises in General Chemistry*—Hunter.)

Mr. Hunter Mr. zurBurg

Chem. 13, 14—General Chemistry—Semesters 1 and 2 (3 and 3) 4 cr.

Purpose: This course is limited to students majoring in chemistry, textile chemistry, or chemistry-engineering. The subject matter is taken up in more detail than in Chemistry 11 and 12 and the additional hour of laboratory work enables the performance of more laboratory experiments. (*An Introduction to College Chemistry*—Briscoe; *Laboratory Manual, Exercises in General Chemistry*—Hunter.)

Mr. Hunter Mr. zurBurg

Chem. 21, 22—Organic Chemistry—Semesters 1 and 2 (2 and 3) 3 cr.

Prerequisite: Chemistry 11, 12.

Purpose: To promote a thorough understanding of the fundamentals of plant and animal biochemistry. *Principal Topics:* Emphasis is placed on nomenclature, properties, preparation, reaction and uses of radicals and compounds of organic substances which are known to give rise to understanding of plant and animal biochemistry. A thorough study of carbohydrates, fats, proteins, pigments, vitamins, essential oils and associated substances of plant and animal origin. (*Organic Chemistry*—Richter;

*Deceased.

Laboratory Manual: Laboratory Practices of Organic Chemistry—Williams and Brewster.)

Mr. Gee

Chem. 21a—Organic Chemistry—Semester 1 (2 and 0) 2 cr.

Purpose: To acquaint the students in Vocational Agricultural Education with the principals of carbon chemistry. *Principal Topics:* The scope of study includes generalized properties and characteristics of organic substances of value to students preparing to teach Vocational Agriculture. (*Introduction to Organic Chemistry*—Garard.)

Mr. Gee

Chem. 23—Qualitative Analysis—Semester 1 (2 and 8) 4 2/3 cr.

Prerequisite: Chemistry 11, 12.

Purpose: To emphasize the principles involved in chemical analysis, to broaden the student's knowledge of inorganic chemistry, to develop deductive reasoning power, and to give practice in manipulation. *Principal Topics:* Solutions and ionization; mass action and the law of chemical equilibrium; solubility product principle; hydrolysis, amphoterism, complex ions; gaseous-liquid and liquid-liquid systems; reactions and equations. The laboratory work consists of analysis of unknown salt mixtures, industrial products, and alloys. (*Qualitative Analysis*—Engelder.)

Mr. Lippincott

Chem. 24—Quantitative Analysis—Semester 2 (2 and 8) 4 2/3 cr.

Prerequisite: Chemistry 11, 12.

Purpose: To give training for the more advanced work; the time is spent on simple quantitative analyses, both volumetric and gravimetric, which are typical of the subdivisions of the subject. *Principal Topics:* Volumetric analysis; gravimetric analysis; concentration of solutions, acidimetry and alkalimetry; oxidation and reduction, iodimetry; theory of electrolysis, assaying, stoichiometry. The laboratory work consists of the preparation of decinormal solutions; analysis of soda ash, sulphate, chloride, pyrolusite, iron ore, bleaching powder, silver coin, and limestone. (*Quantitative Analysis*—Engelder; *Laboratory Manual of Introductory Quantitative Analysis*—Nichols.)

Mr. Lippincott

CHEM. 25—ORGANIC CHEMISTRY—Semester 1 (3 and 6) 5 cr.

Prerequisite: Chemistry 11, 12.

Purpose: This is an extensive course in which the general principles of organic chemistry and the properties of important compounds receive thorough discussion. *Principal Topics:* Hydrocarbons of the methane, ethylene and acetylene series; saturated, unsaturated and polyhydroxy alcohols; monobasic and polybasic acids; ethers, anhydrides and esters; aldehydes and ketones; amines and amides; cyanogen and related compounds; halogen compounds; compounds containing two unlike substituents; carbohydrates; compounds containing phosphorous, arsenic, sulphur, and metals. (*The Chemistry of Organic Compounds*—Conant; *Laboratory Experiments in Organic Chemistry*—Adams and Johnson.)

MR. CARODEMOS

CHEM. 26—ORGANIC CHEMISTRY—Semester 2 (3 and 6) 5 cr.

Prerequisite: Chemistry 25.

Purpose: Same as Chemistry 25. *Principal Topics:* The identification of organic compounds and the determination of their structure; uric acid and related compounds; cyclic hydrocarbons; determination of the structure of aromatic compounds; nitro compounds and sulphonic acids; aromatic amines, nitro compounds and sulphonic acids; aromatic phenols, ethers, acids, aldehydes and ketones; aromatic compounds containing two unlike substituents. (*The Chemistry of Organic Compounds*—Conant; *Laboratory Experiments in Organic Chemistry*—Adams and Johnson.)

MR. CARODEMOS

CHEM. 31, 32—PHYSICAL CHEMISTRY—Semesters 1 and 2 (3 and 4) 4 1/3 cr.

Prerequisite: Chemistry 11, 12; Chemistry 22 or 24; *Suggested:* Organic Chemistry; Calculus.

Purpose: The systematic presentation of modern chemical theories of matter, solutions, and reactions. *Principal Topics:* Gases, liquids, and solids; atomic structure; thermochemistry, theory of solutions; chemical kinetics; equilibrium in homogeneous and heterogeneous systems; the Phase Rule; elementary electro-chemistry. Laboratory determinations of physico-chemical properties and laboratory studies of the topics listed. (*Outlines of Theoretical Chemistry*—Getman and Daniels. *Laboratory Manual, Exercises in Physical Chemistry*—Pollard.)

MR. POLLARD

CHEM. 31a, 32a—PHYSICAL CHEMISTRY—Semesters 1 and 2 (3 and 0) 3 cr.

Same course as Chem. 31, 32 without laboratory work.

MR. POLLARD

CHEM. 33, 33a—QUANTITATIVE ANALYSIS—Semesters 1 and 2 (1 and 3) 2 cr.

Prerequisite: Chemistry 24.

Purpose: To give further training and experience in quantitative chemical analysis through lectures and laboratory work. This course involves both gravimetric and volumetric analysis. *Principal Topics:* Complete analysis of clays, silicates, a partial analysis of coal, pig iron, and steel. Volumetric analysis includes the determination of arsenic, copper, and lead in insecticides. Quantitative analysis of alloys, including some quantitative electrometric separations. (*Quantitative Analysis*—Mahin.)

MR. MITCHELL

CHEM. 34—DAIRY CHEMISTRY—Semester 2 (2 and 3) 3 cr.

Prerequisite: Chemistry 21, 22; *Suggested:* Chemistry 23, 24.

Purpose: A study of Chemistry in its relation to the dairy industry. *Principal Topics:* Acquainting the student with the manipulation of apparatus found in the modern dairy laboratory; analyses of milk and dairy products; detection of adulterants, preservatives, colors, and causes of spoilage of dairy products. (References.)

MR. CARODEMOS

CHEM. 35, 36—THE CARBON COMPOUNDS—Semesters 1 and 2 (2 and 3) 3 cr.

Prerequisite: Chemistry 26.

Purpose: To review and study more intensively representative classes of organic compounds, and to survey available methods for establishing the structure and configuration of organic molecules. In the laboratory the methods of organic synthesis and analysis are studied. (*Organic Chemistry*—Whitmore; *Practical Methods of Organic Chemistry*—Gattermann.)

MR. CARODEMOS

CHEM. 37, 38—GENERAL BIOCHEMISTRY—Semesters 1 and 2 (2 and 0) 2 cr.

Prerequisite: Chemistry 23, 24, 25; *Suggested:* Chemistry 31.

Purpose: To give a comprehensive outlook and an acquaintance with the broader aspects of biochemistry. This course is of particular value to the pre-medical, pre-dental, and agricultural student. (*Outlines of Biochemistry*—Gortner.)

MR. CARODEMOS

CHEM. 41, 42—INORGANIC CHEMISTRY—Semesters 1 and 2 (2 and 0) 2 cr.

Prerequisite: Chemistry 11, 12; *Suggested:* Chemistry 31, 32.

Purpose: A comprehensive survey of the field of inorganic chemistry through lectures and lecture experiments. *Principal Topics:* Development of modern theories of valence and allied subjects and a detailed study of the elements and their compounds, based on the periodic system and including both well-known and rarer elements. (*Systematic Inorganic Chemistry*—Caven and Lander.)

MR. HUNTER

CHEM. 43, 44—COLLOID CHEMISTRY—Semesters 1 and 2 (2 and 0) 2 cr.

Prerequisite: Chemistry 31, 32.

Purpose: The general theory of colloid chemistry and its applications. *Principal Topics:* Adsorption, contract catalysis, surface tension, preparation, and properties of colloidal solutions, gelatinous precipitates and jellies, emulsions, foams, fog, smoke. (*Colloid Chemistry*—W. D. Bancroft.)

MR. POLLARD

CHEM. 45—HISTORY OF CHEMISTRY—Semester 1 (2 and 0) 2 cr.

Prerequisite: Chemistry 25, 26.

Principal Topics: A study of the development of the science of chemistry from the earliest times to the present day. (*History of Chemistry*—J. R. Partington.)

MR. POLLARD

CHEM. 46—STOICHIOMETRY—Semester 2 (2 and 0) 2 cr.

Prerequisite: Chemistry 11, 12.

Purpose: To study various types of fundamental problems in chemistry through lectures and classroom work. *Principal Topics:* Balancing equations, principally oxidation and reduction reactions, gas law problems, atomic and molecular weights; factors; electrochemical problems; standard solutions; problems dealing with indirect analysis; calculations involving the elimination or introduction of a constituent; acidimetry and alkalinity; adjusting solutions to a desired normality and oxidation and reduction problems. (*Calculations of Quantitative Chemical Analysis*—Hamilton and Simpson.)

MR. MITCHELL

CHEM. 47—TECHNICAL ANALYSIS—Semester 1 (1 and 6) 3 cr.

Prerequisite: Chemistry 24 or 33.

Purpose: To study the chemical principles involved, and give training and experience in the analysis of a great many industrial products. Special attention is given to the standard, accurate methods. *Principal Topics:* Fertilizer analysis, organic and mineral analysis of feeding materials; complete water analysis, both mineral and sanitary; the analysis of sugar products, special attention being given to the use of the polariscope in this work. (Methods of the Association of Official Agricultural Chemists.)

MR. MITCHELL

CHEM. 50—THESIS—Semester 2 (0 and 9) 3 cr.

Principal Topics: Original investigation of an assigned problem in some branch of chemistry selected by the student. This work may be carried out under the supervision of any qualified member of the staff. A thesis covering the work is a requirement of the course.

STAFF OF SCHOOL OF CHEMISTRY

CHEM. 53, 54—INDUSTRIAL CHEMISTRY—Semesters 1 and 2 (2 and 0) 2 cr.

Prerequisite: Junior or Senior standing. *Suggested:* Chem. 31, 32.

Purpose: To study processes, operations, and reactions of chemical manufacture as related to such industries as paper, glass, fertilizer, sugar,

leather, petroleum, etc. Visits are made to various plants and inspection reports made.

Mr. zurBurg

Chem. 55, 56—Elementary Chemical Microscopy—Semesters 1 and 2 (1 and 2) 1 2/3 cr.

Prerequisite: Chemistry 23, 24, 25; Geology 33.

Purpose: To train the student in appreciating the value of the microscope in the industries. The microscope has come to be regarded as an indispensable adjunct in chemical-industrial operations in which economy of time, labor, and material is essential. *Principal Topics:* Theoretical consideration of the construction of optical instruments and their uses in chemical work. The laboratory work will include a study of the crystalline structure of common chemicals and their microscopic detection, determination of particle size and the solution of various practical industrial problems which can best be solved by the use of the microscope.

Mr. Hunter Mr. Carodemos

Chem. 58—Senior Problems—Semester 2 (1 and 0) 1 cr.

Prerequisite: Senior standing in School of Chemistry

Purpose: The course in Senior Problems will be given somewhat in the manner of a seminar. *Principal Topics:* The staff of the School of Chemistry will meet each week with the seniors. Each senior will be given a certain definite problem to be worked out in connection with certain members of the staff, these problems to be reported on at the weekly meetings. Recent advances in chemistry and chemical literature will receive attention.

Staff of School of Chemistry

CIVIL ENGINEERING

Mr. Clarke

Mr. Glenn **Mr. Quattlebaum *Mr. Stevenson

C. E. 21, 22—Surveying—Semester 1 (2 and 0) 2 cr. Semester 2 (3 and 0) 3 cr.

Prerequisite: Math. 11, 12; Drawing 13, 14.

Purpose: To give the student considerable facility in the theory and use of modern surveying instruments and methods, in both field and office

*On Leave

**In Place of Mr. Stevenson, on leave

work. *Principal Topics:* Survey of tract, computation of area; description by metes and bounds; U. S. Public Land Surveys; differential and profile leveling and plotting; topographic surveying and mapping. (*Davis, Foote and Rayner.*)

Mr. Clarke

C. E. 21a, 22a—Surveying Field and Office Work—Semester 1 (0 and 3) 1 cr. Semester 2 (0 and 2) 2/3 cr.

Prerequisite: Math. 11, 12; Drawing 13, 14.

Purpose: To put into practice the theoretical principles covered in C. E. 21, 22; which subject must be scheduled concurrently with this. The work during the first semester covers surveys of tracts for legal description and computation of area; differential and profile leveling and plotting. The work during the second semester covers topographic surveying and mapping. (*Davis, Foote and Rayner.*)

Mr. Clarke

C. E. 23—Surveying—Semester 1 or 2 (1 and 0) 1 cr.

Prerequisite: Math. 11, 12; Drawing 13, 14; Registration in C. E. 23a.

Purpose: To give students not majoring in Civil Engineering practice in making preliminary surveys for, and computing cost of, engineering projects. *Principal Topics:* The use of surveying instruments, maps, profiles, cross-sections, land measurement, earth-work computations, and road location. (*Elementary Surveying*—Rayner.)

Mr. Quattlebaum

C. E. 23a—Surveying Field and Office Work—Semester 1 or 2 (0 and 2) 2/3 cr.

Prerequisite: Math. 11, 12; Drawing 13, 14; Registration in C. E. 23.

Purpose: To put into practice the theoretical principles covered in C. E. 23. (*Elementary Surveying*—Rayner.)

Mr. Quattlebaum

C. E. 27, 28—Materials and Methods of Construction—Semesters 1 and 2 (2 and 0) 2 cr.

Purpose: To familiarize the student with the common materials and technical terms used in construction, and the ways in which the materials

are used. *Principal Topics:* Foundations on soft soils; concrete, brick, and stone masonry; wood, steel, and reinforced concrete construction; floor and roof coverings; plastering and painting; and methods of cost-keeping. (*Building Construction*—Huntington.)

Mr. Clarke

C. E. 30—Summer Surveying Camp

Between the Sophomore and Junior years, two weeks in June, at *Camp Clarke,* near Steedman, S. C. 3 credits.

Prerequisite: C. E. 21, 22.

Purpose: To give civil engineering students experience not only in camp organization and sanitation, but also in meeting field problems which arise in a rough country, several miles away from headquarters. *Principal Topics:* Reconnaissance, preliminary survey, and final location survey for a road between two selected termini, including plotting of map and profile. (See also C. E. 36.)

Mr. Clarke

C. E. 31—Mechanics—Semester 1 (3 and 0) 3 cr.

Prerequisite: Math. 21, 22. Physics 21, 22, 23, 24.

Purpose: To enable the student to combine his knowledge of mathematics and physics for computing and analyzing balanced forces acting on a point, a member, or a structure. The graphical method of solving problems in statics is also studied. *Principal Topics:* Components, resultants, reactions, moments of forces, center of gravity, moment of inertia. (*Applied Mechanics*—Poorman.)

Mr. Quattlebaum

C. E. 32—Strength of Materials—Semester 2 (3 and 0) 3 cr.

Prerequisite: C. E. 31 or M. E. 31.

Purpose: To study the strength of brick, stone, concrete, wood, and steel under the action of tensile, compressive, flexural, and shearing stresses. The elastic theory is used throughout the course. *Principal Topics:* Compression, tension, shear, modulus of elasticity, riveted joints, beams columns, struts, slab. (*Strength of Materials*—Boyd.)

Mr. Quattlebaum

C. E. 34—Graphic Statics—Semester 2 (1 and 2) 1 2/3 cr.

Prerequisite: C. E. 31.

Purpose: A study is made in this course of the most useful application of graphical analysis to stresses in structures. Stresses due to wind and dead weight on roof trusses are analyzed. The design for one roof truss is worked out in detail. *Principal Topics:* Types of roof trusses, wind loads, dead loads, Maxwell diagrams, string polygons, built up members, column formula. (*Stresses in Framed Structures*—Ketchum.)

Mr. Quattlebaum

C. E. 35—Route Surveying—Semester 1 (3 and 0) 3 cr.

Prerequisite: C. E. 21, 22, 30.

Purpose: To familiarize the student with the special problems which arise in a survey for railroads, highways, canals, sewers, pipe lines, and transmission lines. *Principal Topics:* Theory of simple, compound, and reversed curves; transition spiral; railroad turnouts, computations of earthwork. (*Route Surveying*—Pickels and Wiley.)

Mr. Clarke

C. E. 36—Roads and Pavements—Semester 2 (3 and 3) 4 cr.

Prerequisite: C. E. 21, 22, 30, 35.

Purpose: A study of the design, location, and construction of roads and pavements. *Principal Topics:* Economics of highway construction, location and design. Study of factors relating to highway construction, methods, and materials.

The design period is devoted to the preparation of detailed plans for a highway, using the notes taken in C. E. 30 at the Sophomore Summer Camp. (*Highway Design and Construction*—Bruce.)

Mr. Glenn

C. E. 37—Stresses in Simple Structures—Semester 1 (0 and 4) 1 1/3 cr.

Prerequisites: Math. 21, 22; Physics 24, 26; Drawing 25, 28.

Purpose: The calculation of stresses in statically determinate structures. *Principal Topics:* This course covers the application of the prin-

ciples of mechanics as applied to the determination of stresses in roof trusses, bents, cranes, bridges and other simple structures. (*AISC Handbook of Steel Construction and Simple Steel Structures*—Morris.)

Mr. Quattlebaum

C. E. 38—Design of Simple Structures—Semester 2 (0 and 6) 2 cr.

Prerequisites: Math. 21, 22; Physics 24, 26; Drawing 25, 28; C. E. 37.

Purpose: The study of the elementary principles of design of roof trusses, bents, cranes, bridges and other simple structures of wood and steel. Included in this course is the complete detailed analysis and design of a railroad plate girder bridge. (*AISC Handbook of Steel Construction and Simple Steel Structures*—Morris.)

Mr. Quattlebaum

C. E. 41—Structural Design—Semester 1 (2 and 3) 3 cr.

Prerequisite: Drawing 25, 28; C. E. 31, 34; C. E. 32 or M. E. 31, 49; C. E. 37; C. E. 38.

Purpose: Fundamentals of structural steel design. *Principal Topics:* The complete detailed design of a steel highway bridge along with the economics of design. (*Stresses in Simple Structures*—Urquhart and O'Rourke. *Design of Steel Structures*—Urquhart and O'Rourke.)

Mr. Glenn

C. E. 42—Structural Design—Semester 2 (2 and 6) 4 cr.

Prerequisite: C. E. 31, 32 or M. E. 31, 49, and C. E. 34, 37, 38, 41, 45.

Purpose: A study of the design and construction of reinforced concrete structures. *Principal Topics:* Economics and design of reinforced concrete, bridges, piers, abutments, and retaining walls, and buildings. (*Highway Bridges*—Kirkham; *Design of Concrete Structures*—Urquhart and O'Rourke.)

Mr. Glenn

C. E. 43, 44—Materials Testing Laboratory—Semesters 1 and 2 (0 and 3) 1 cr.

Prerequisites: C. E. 32, 36.

Purpose: A study of the physical properties of construction materials and the standard methods of determining these properties. *Principal*

Topics: Physical test and analysis of construction materials, Portland cement, sand, concrete, etc., with special reference to highway materials both bituminous and non bituminous. In this course is included a study of Soil Mechanics as pertains to soil stabilization, with standard tests to determine the physical properties of soils.

MR. GLENN

C. E. 45—REINFORCED CONCRETE DESIGN—Semester 1 (2 and 3) 3 cr.

Prerequisite: C. E. 31, 34, 32, or M. E. 31, 49.

Purpose: A study of theory and practice of reinforced concrete design. *Principal Topics:* Elements of Designs of Reinforced Concrete, beams, slabs, columns, footings, etc. (*Design of Concrete Structures*—Urquhart and O'Rourke.)

MR. GLENN

C. E. 46—MUNICIPAL AND SANITARY ENGINEERING—Semester 2 (5 and 0) 5 cr.

Prerequisite: C. E. 49.

Purpose: To familiarize the student with the procedure necessary to supply an adequate amount of potable water for public or private purposes, and the design and construction of sewerage systems and sewage treatment plants. *Principal Topics:* Quantity of water necessary, sources of supply, methods of utilizing source of supply; analysis, treatment of unpotable water; impounding reservoirs, pipe lines, methods of distribution, fire protection; amount of sewage, separate or combined sewerage systems, specific hydraulic problems arising in sewer design, manholes, and other appurtenances; maintenance of sewers, disposal of sewage by dilution, and methods of treatment by sedimentation, septic tanks, Imhoff tanks, contact beds, trickling filters, intermittent sand filters, activated sludge, principles of irrigation by sewage. (*Water Supply and Sewerage*—Steel.)

MR. CLARKE

C. E. 47—REINFORCED CONCRETE DESIGN—Semester 1 (2 and 0) 2 cr.

Prerequisite: C. E. 31, 32, 34, or M. E. 31, 49.

Purpose: To give students not majoring in Civil Engineering a working knowledge of the theory of reinforced concrete design. *Princi-*

pal Topics: Design of reinforced concrete slabs, beams, girders, columns, and foundations. (*Design of Concrete Structures*—Urquhart and O'Rourke.)

MR. GLENN

C. E. 48—CITY PLANNING—Semester 2 (2 and 0) 2 cr.

Prerequisite: Registration in Civil Engineering in either the Senior or Junior year. *Elective Course:* Offered only if the registration justifies.

Purpose: To acquaint the student with the special problems confronting a city engineer or city manager not specifically of an engineering nature, but for the solution of which the public looks to the city officials. *Principal Topics:* Origin, growth, and development of cities; streets and street systems; traffic control; railway and water traffic problems; airports; parks and playgrounds; zoning; legal problems involved. (*Principles of City Planning*—Lohmann.)

MR. CLARKE

C. E. 49—HYDRAULICS—Semester 1 (3 and 0) 3 cr.

Prerequisite: Math. 21, 22; Phys. 21, 22, 23, 24.

Purpose: To acquaint the student with the behavior of water at rest or in motion. *Principal Topics:* Pressures exerted by water at rest; methods of measuring pressure; principles of water in motion; Bernoulli's theorem; measurement of water by orifices, weirs, nozzles, and Venturi meters; flow of water through short and long pipes; flow of water in open channels. (*Hydraulics*—Schedder and Dawson.)

MR. CLARKE

C. E. 50—THESIS—Semester 1 or 2. 1 or 2 credits. (3 credits for exceptional work.)

Civil Engineering students of exceptional ability, with the permission of the Head of the Civil Engineering department may choose as an elective, the preparation and submission of a thesis covering some phase of Civil Engineering. This thesis may be either an independent experimental investigation entered into with the hope of discovery of new engineering knowledge, or the independent prosecution of some already somewhat stabilized problem in engineering design. Those students who desire to submit a thesis, as a part of their free electives, must present to the

Head of the Civil Engineering Department not less than one month prior to the opening of the semester during which the thesis work is intended to be done, a complete outline of the work contemplated in the proposed thesis and the projected method of procedure. (Amount of credit given depends upon the nature of the subject, the amount of time devoted to it, and the quality of the work.)

Mr. Clarke

DAIRY

Mr. LaMaster Mr. Goodale

Dairy 21—Introductory Dairying—Semester 1 or 2 (2 and 2) 2 2/3 cr.

Purpose: To give a practical working knowledge of dairy husbandry and dairy products. *Principal Topics:* History of dairying, dairy breeds, feeds and feeding, judging dairy animals, dairy farm buildings, quality milk production, testing milk and some of its products, the manufacture of milk products, and the food value of milk and milk products. (*Principles of Dairying*—Henry F. Judkins—Richard W. Smith, Jr., Second Edition.)

Mr. Goodale

Dairy 31—Dairy Cattle Judging—Semester 1 (0 and 3) 1 cr.

Prerequisite: Dairy 21.

Purpose: To give an understanding of dairy form, breed type, and relations between form and function in dairy cattle. *Principal Topics:* Study of score cards, show yard requirements and classifications; fitting cattle for show and sale; values as influenced by form; buying dairy cattle; practice in judging Jersey, Guernsey and Holstein cattle of all ages.

Mr. LaMaster

Dairy 32—Genetics—Semester 2 (2 and 2) 2 2/3 cr.

Suggested antecedent course: Ag. Ec. 33.

Purpose: To give the student an understanding of the principles of heredity and variation with special reference to their application to the animal kingdom. *Principal Topics:* Mendel's law, physical basis of inheritance, chromosome theory, linkage, expression and interaction of fac-

tors, origin of hereditary differences, inheritance of quantitative characters, biometric methods. (*Principles of Genetics*—Sinnott and Dunn—Second Edition.)

Mr. LaMaster

Dairy 34—Dairy Plant Organization and Management—Semester 2 (3 and 0) 3 cr.

Prerequisite: Dairy 21.

Purpose: To give a comprehensive understanding of the business of operating dairy plants with special emphasis on organization and practical management problems. *Principal Topics:* Survey before organization, form of organization, creamery construction, sewage disposal, refrigeration, labor, purchasing raw materials, equipment and supplies, power, water, rent, depreciation, interest, insurance, overrun, mechanical losses, manufacturing unit costs, marketing records, salesmanship, advertising, business correspondence, credits and collections, creamery bookkeeping, drawing creamery plans, and mathematical problems for the dairy plant operator. (*Management of Dairy Plants, Revised Edition, 1938*—Mortensen.)

Mr. Goodale

Dairy 35—Dairy Cattle Feeding and Management—Semester 1 (2 and 2) 2 2/3 cr.

Purpose: To give the fundamental principles in the care, feeding, and management of dairy cattle of all ages. *Principal Topics:* General considerations in selecting a breed, selecting the individual cow, calf raising, growth and development, raising dairy heifers, care and management of the milking herd, milking factors, feeding for milk production, stables for cows, dairy barn equipment, handling manure. (*Dairy Cattle Feeding and Management, Third Edition, 1938*—Henderson.)

Mr. LaMaster

Dairy 41—Dairy Manufactures (Butter and Market Milk)—Semester 1 (2 and 3) 3 cr.

Prerequisite: Dairy 21 and Chem. 38.

Purpose: To give a thorough knowledge of the manufacture of creamery butter, and the processing of market milk and special milks. *Principal Topics:* Development of buttermaking, plant equipment, factory sanitation, processing market milk, testing milk and milk products, buy-

ing milk and cream, receiving and grading milk and cream, neutralization, pasteurization, removing flavors and odors, ripening, starters and starter making, cultured milks, churning cream and all subsequent processes until butter is ready for market, composition control, by-products, butter scoring, and butter storage. (*The Butter Industry*—Second Edition, 1927—Hunziker.)

Mr. Goodale

Dairy 42—Dairy Manufactures (Ice Cream and Cheese)—Semester 2 (2 and 4) 3 1/3 cr.

Prerequisite: Dairy 21 and Chem. 38.

Purpose: A thorough study of ice cream making and the manufacture of soft cheese. *Principal Topics:* Development of ice cream industry; classification and specialties; colors and flavors; fruits in ice cream and ices; ingredients, calculation, and processing of the mix, and all subsequent steps in manufacturing and storing until ice cream is ready for consumer; composition control, analyzing products used; defects in ice cream; merchandising, processing, and marketing soft cheese. (*Ice Cream Making*—Sommer, third edition.)

Mr. Goodale

Dairy 43—Dairy Cattle Breeding—Semester 1 (1 and 2) 1 2/3 cr.

Prerequisite: Dairy 32, Genetics.

Purpose: To give the student an understanding of the methods used in developing and improving the breeds of dairy cattle. *Principal Topics:* Breed history, pedigrees, advanced register, methods of indexing proved sires, statistical study of the relations of environment to production.

Mr. LaMaster

Dairy 48—The Nutrition of Dairy Cattle—Semester 2 (2 and 0) 2 cr.

Prerequisite: Dairy 35.

Purpose: To give the student an understanding of the methods by which the animal body converts vegetable products into animal products. *Principal Topics:* Composition of animals and feeding stuffs, digestion and resorption, circulation, respiration, and excretion, metabolism, balance of nutrition, requirements for maintenance, growth, reproduction, and milk production, function of minerals and vitamins.

Mr. LaMaster

DAIRY 51—SEMINAR—Semester 1 (1 and 0) 1 cr.

DAIRY 52—SEMINAR—Semester 2 (1 and 0) 1 cr.

Prerequisite: Dairy 21 and Dairy 35.

Purpose: To study special research problems in production and manufactures and to report the exposition of the results by theses. *Principal Topics:* Special selected individual topics not fully covered in course work, with emphasis placed on latest research.

MR. LAMASTER MR. GOODALE

DRAWING

MR. KLUGH

MR. HARRIS MR. HODGE MR. DOUGLASS MR. SHIGLEY

DRAWING 11—FREEHAND DRAWING—Semester 1 (0 and 2) 2/3 cr.

Purpose: To give the student a training in seeing and representing proportion and detail. *Principal Topics:* Proportion, detail, perspective.

MR. HODGE MR. DOUGLASS

DRAWING 12—MECHANICAL DRAWING—Semester 2 (0 and 2) 2/3 cr.

Purpose: To train the student in the fundamentals of mechanical drawing to the point that he will be able to read drawings and make drawings of simple subjects. *Principal Topics:* Orthographic projection, dimensioning, blue printing. (Text to be announced.)

MR. HODGE MR. DOUGLASS

DRAWING 13—ENGINEERING DRAWING—Semester 1 (0 and 4) 1 1/3 cr.

Purpose: To give the student a thorough grounding in the fundamental principles of Engineering Drawing. *Principal Topics:* Lettering, orthographic projection, threads, sectioning, tracing. (*Engineering Drawing*—French.)

MR. HARRIS MR. SHIGLEY MR. DOUGLASS MR. CHAPMAN

DRAWING 14—ENGINEERING DRAWING—Semester 2 (0 and 4) 1 1/3 cr. *Prerequisite:* Drawing 13.

Purpose: To continue Drawing 13, bringing in refinements and details that time did not permit in the fundamental course. About one-half of this course will be freehand sketching. (*Engineering Drawing*—French.)

Mr. Harris Mr. Shigley Mr. Douglass Mr. Chapman

Drawing 25—Mechanical Drawing—Semester 1 (0 and 2) 2/3 cr.

Prerequisite: Drawing 14.

Purpose: To ground the student in those fundamentals and essentials of the language of the engineer. *Principal Topics:* A continuation of the work given in Drawing 14; the descriptive geometry applications to graded problems, reading drawings, and layout work. (*Notes and Engineering Drawing*—French.)

Mr. Klugh Mr. Douglass

Drawing 26—Elementary Design and Kinematics—Semester 2 (0 and 2) 2/3 cr.

Prerequisite: Drawing 25.

Purpose: To train the student to apply problems in drafting room solution. *Principal Topics:* Elementary principles in Machine Design, carefully studied and worked and in class problems, theory and practice involving problems in Kinematics and applications to some principles in machine design. (*Engineering Kinematics*—Smith)

Mr. Klugh Mr. Douglass

Drawing 28—Structural Drawing—Semester 2 (0 and 2) 2/3 cr.

Prerequisite: Drawing 25.

Purpose: To acquaint the student with those needful helps in taking up major design problems in the structural field. *Principal Topics:* Elementary structural principles; study of symbols, proportions, and minor design; reading of structural drawings, study of methods in drafting, tracing, and blue printing. (*Engineering Drawing*—French.)

Mr. Klugh

Drawing 31—Machine Design—Semester 1 (0 and 3) 1 cr.

Prerequisite: Drawing 26.

Purpose: To teach the student the aid of layouts in the solution of many of his problems. *Principal Topics:* The course is a continu-

ation of Drawing 26, giving a more extended course in the theory and application of design problems; calculations required and specifications stressed. (*Notes and Engineering Kinematics*—Smith.)

Mr. Klugh Mr. Douglass

Drawing 32—Machine Design—Semester 2 (0 and 3) 1 cr.

Prerequisite: Drawing 31.

Purpose: To give the proper background to the student before he takes up the design problems in his major subject. *Principal Topics:* Simple problems in design, stressing the theory of design and application to specific problems. Calculations required, discussions encouraged concerning involved problems, theory stressed above other things, for the purpose of understanding some principles needed in the design of machines. (*Machine Design*—Bradford and Eaton.)

Mr. Klugh

ECONOMICS

Mr. Ward Mr. Gates

Econ. 23, 24—Principles of Economics—Semesters 1 and 2 (2 and 0) 2 cr.

Prerequisite: Sophomore standing.

Purpose: To teach fundamental principles and lay the foundations for more detailed study of special problems. *Principal Topics:* Theory of value; specialization and exchange; land, labor, and capital as productive forces; rent, wages, interest, and profits as distributive shares of the national income; money and banking; risk-taking; business cycles, and foreign trade. (*Economic Principles, Problems and Policies*—Kiekhofer.)

Mr. Ward Mr. Gates

Econ. 31—Contemporary Economic Problems—Semester 1 or 2 (3 and 0) 3 cr.

Prerequisite: Econ. 23 and 24.

Purpose: To present a critical analysis of the attacks on the structure and workings of the present economic system and of the leading proposals for the economic reorganization of society. *Principal Topics:* The integration of industry; industrial conflict; labor problems, the price system and its control; social insurance; government ownership and regula-

tion; comprehensive programs of economic policy such as liberalism, socialism, and economic planning. (*Contemporary Economic Problems*—Taylor.)

Mr. Ward

Econ. 32.—Money and Banking—Semester 2 (3 and 0) 3 cr.

Prerequisite: Econ. 23 and 24.

Purpose: To survey the field of monetary standards and banking systems, together with a comprehensive study of the principles of money and banking. *Principal Topics:* The origin, nature, and functions of money; monetary standards, monetary history of the United States; money and prices; commercial banking and its development in the United States; foreign exchange; the Federal Reserve System, and the problem of price stabilization. (*Money and Banking*—Bradford.)

Mr. Ward

Econ. 44—Introduction to Business—Semester 2 (3 and 0) 3 cr.

Prerequisite: Economics 23 and 24, and permission of the instructor.

Purpose: To acquaint the student with the organization of American industries, the terms used, methods followed, problems encountered, and ways in which they are handled by business men. *Principal Topics:* The tools of industrial inquiry; business organization; production methods, problems and costs; labor relations and labor problems; prices and price arrangements; financing methods and problems; tax calculations and problems and industrial and economic planning. (*Introduction To Business*—Spengler and Klein.)

Mr. Gates

ELECTRICAL ENGINEERING

Mr. Rhodes

Mr. Tingley **Mr. Smith *Mr. Credle Mr. Slone Mr. Massey

E. E. 22—Electric Circuits—Semester 2 (2 and 0) 2 cr.

Prerequisite: Concurrent with Phys. 22 and Math. 22.

An introductory course for sophomore electrical engineers dealing with basic ideas and the fundamental laws of electric and electromagnetic circuits.

Mr. Rhodes Mr. Tingley

*On leave 1938-1939.

**In place of Mr. Credle.

E. E. 31—Direct-Current Machinery—Semester 1 (5 and 0) 5 cr.

Prerequisite: Phys. 21, 22; Math. 21, 22; E. E. 22.

The theory, construction, and operating characteristics of direct-current generators and motors; control equipment; transmission and distribution; and industrial applications. This course also includes continuation work on basic principles begun in E. E. 22.

Mr. Rhodes

E. E. 31a—Electrical Measurements—Semester 1 (0 and 4) 1 1/3 cr.

Prerequisite: Must parallel or follow E. E. 31.

A laboratory study of the principles of direct-current, magnetic, and electrostatic circuits and the instruments used in their measurement. Emphasis is placed on proper choice of equipment, correct laboratory procedure and accurate presentation of results.

Mr. Smith

E. E. 32—Alternating-Current Circuits—Semester 2 (5 and 0) 5 cr.

Prerequisite: E. E. 31.

The theory of the reactions of electric circuit constants to alternating currents and the development of a logical mathematical solution of single-phase and polyphase circuits.

Mr. Tingley Mr. Smith

E. E. 32a—Electrical Laboratory—Semester 2 (0 and 4) 1 1/3 cr.

Prerequisite: E. E. 31. Must parallel or follow E E. 32.

Part I. Tests to determine the principal characteristics of direct-current generators, motors and auxiliaries.

Part II. Experiments on the theory of single-phase and polyphase alternating current circuits. Embraces a study of leading alternating current instruments.

Mr. Smith

E. E. 33—Direct-Current Machinery—Semester 1 (4 and 0) 4 cr.

Prerequisite: Phys. 21, 22; Math. 21, 22.

The laws of the electric and magnetic circuits; the theory and operating characteristics of direct-current generators and motors; efficiency of direct-current machinery; direct-current distribution.

Mr. Smith Mr. Slone

E. E. 33a—Electrical Measurements—Semester 1 (0 and 3) 1 cr.

Prerequisite: Must parallel or follow E. E. 33.

A course embracing essentially the same experiments as those given in E. E. 31a.

Mr. Massey

E. E. 34—Alternating-Current Circuits—Semester 2 (4 and 0) 4 cr.

Prerequisite: E. E. 33.

Single-phase and polyphase circuits; alternating-current instruments; theory of alternating-current transformers.

Mr. Smith Mr. Slone

E. E. 34a—Electrical Laboratory—Semester 2 (0 and 3) 1 cr.

Prerequisite: Must parallel or follow E. E. 34.

A course embracing essentially the same experiments as those of E. E. 32a.

Mr. Massey

E. E. 35—Electrical Machinery—Semester 1 (2 and 0) 2 cr.

Prerequisite: Phys. 11, 12 or Phys. 21, 22.

An elementary course in direct-current and alternating-current machinery. Intended primarily to acquaint the student with the adaptability of electric motors for specific applications.

Mr. Slone

E. E. 35a—Electrical Laboratory—Semester 1 (0 and 2) 2/3 cr.

Prerequisite: Physics 11, 12 or Physics 21, 22.

A series of experiments demonstrating the principal applications of motors and other electrical equipment.

Mr. Massey

E. E. 36—Electrical Machinery—Semester 2 (3 and 0) 3 cr.

Prerequisite: Phys. 21, 22.

An elementary course in direct-current and alternating-current machinery with special emphasis on operating characteristics and adaptability of specific types for certain duties.

Mr. Slone

E. E. 36a—Electrical Laboratory—Semester 2 (0 and 2) 2/3 cr.

Prerequisite: Physics 21, 22.

A number of laboratory demonstrations of the characteristics of electrical equipment used by civil engineers.

Mr. Massey

E. E. 38—Vocational Electricity—Semester 2 (1 and 2) 1 2/3 cr.

Prerequisite: E. E. 35.

Planned for teachers in high schools. It embraces (1) the application of elementary principles of electricity and magnetism to experiments and projects of special interest and value to high school students (2) the principles of organization of such work by the instructor.

Mr. Smith

E. E. 41—Alternating-Current Machinery—Semester 1 (5 and 0) 5 cr.

Prerequisite: E. E. 31, 32.

Theory, design, and operating characteristics of transformers, synchronous machines, polyphase induction motors, and alternating-current machinery auxiliaries.

Mr. Rhodes

E. E. 41a—Electrical Laboratory—Semester 1 (1 and 3) 2 cr.

Prerequisite: Must parallel or follow E. E. 41.

Part I: A complete experimental analysis of losses and operating characteristics of direct-current machines (continuation of E. E. 32a).

Part II. A laboratory study of the operating characteristics of (1) synchronous generator including phase connections, voltage regulation, efficiency and parallel operation (2) induction regulators and constant-current transformers.

Mr. Tingley

E. E. 42—Alternating-Current Machinery—Semester 2 (3 and 0) 3 cr.

Prerequisite: E. E. 41.

Part I. A continuation of E. E. 41 embracing single-phase motors, synchronous converters, mercury arc rectifiers, and alternating-current machinery controls.

Part II. Special problems, such as harmonics in generators and transformers, short circuits, machine and system stability.

Mr. Rhodes

E. E. 42a—Electrical Laboratory—Semester 2 (1 and 3) 2 cr.

Prerequisite: E. E. 41, 41a.

Continuation of E. E. 41a including a comprehensive study of single-phase transformers, operating characteristics of polyphase induction motors, synchronous motors, synchronous converters, single-phase motors, and automatic magnetic and electronic control equipment.

Mr. Tingley

E. E. 43—Alternating-Current Machinery—Semester 1 (3 and 0) 3 cr.

Prerequisite: E. E. 34.

The theory and characteristics of transformers, synchronous generators, and motors, polyphase induction motors, single-phase motors, synchronous converters, rectifiers, and auxiliaries.

Mr. Tingley

E. E. 43a—Electrical Laboratory—Semester 1 (0 and 3) 1 cr.

Prerequisite: Must parallel or follow E. E. 43.

A course paralleling E. E. 43 for the experimental determination of the characteristics of principal types of alternating-current transformers, generators, motors, converters, and controls.

Mr. Slone

E. E. 44—Electric Power Transmission—Semester 2 (3 and 0) 3 cr.

Prerequisite: E. E. 41.

The electrical and economic principles of electric power transmission. A comprehensive study of line constants and losses and how they affect the regulation of the long and short electrical line; system regulations protection and stability; and efficiency of transmission of large blocks of power.

Mr. Tingley

E. E. 45—Electrical Design—Semester 1 (0 and 3) 1 cr.

Prerequisite: E. E. 31.

The application of the fundamental principles of electric and magnetic circuits through a complete design of a generator or motor, including prediction of operating characteristics from design data.

Mr. Rhodes

E. E. 46—Electrical Design—Semester 2 (0 and 3) 1 cr.

Prerequisite: E. E. 41.

Problems in transformer and induction motor design and in transmission system regulation. These problems correlate with E. E. 41 and E. E. 44.

Mr. Rhodes

E. E. 47—Electronics—Semester 1 (2 and 0) 2 cr.

Prerequisite: E. E. 32 or E. E. 34.

The properties of electron tubes with particular reference to their uses in industry and in communication. Characteristics of high vacuum

and gas filled diodes, high vacuum triodes and thyratrons are the principal topics.

Mr. Smith

E. E. 48—Radio Communication—Semester 2 (2 and 0) 2 cr.

Prerequisite: E. E. 47.

The application of electron tubes to the field of communication. The use of the triodes as an audio frequency amplifier, as a radio frequency amplifier and as an oscillator. The characteristics of other multi-element tubes.

Mr. Credle

E. E. 49—Advanced Individual Problem—Semester 1 or 2 (2 and 0) 2 cr.

Intended to enable a limited number of students to undertake specific projects in which they may be especially interested. The laboratories afford excellent facilities for this work.

Department Staff

E. E. 50—Power Stations—Semester 2 (2 and 0) 2 cr.

Prerequisite: E. E. 41 or 43.

A course covering the general subject of economic production of electrical energy and the study of typical arrangements of generating equipment in steam and in hydro-stations.

Mr. Rhodes

E. E. 52—Electrical Distribution—Semester 2 (2 and 0) 2 cr.

Technical and economic features of local wiring systems; city and rural distribution; control and protective equipment. Includes reference reading and preparation of papers for class presentation.

Mr. Tingley

E. E. 54—Illumination—Semester 2 (2 and 0) 2 cr.

Prerequisite: E. E. 41 or 43.

Fundamental principles of illumination embracing light sources; photometry; reflection and absorption; color; street, residence, industrial and commercial lighting.

Mr Rhodes

E. E. 56—Electric Transients—Semester 2 (1 and 3) 2 cr.

Prerequisite: E. E. 32.

To enable a few of the more advanced electrical engineering students to obtain a clearer conception of the physical phenomena and mathematical analysis of electrical circuits and machines in the transient state and to verify the theory involved by means of oscillographs.

Mr. Tingley

ENGLISH

Mr. Daniel

Mr. Bradley Mr. Taylor Mr. Lane Mr. Kinard Mr. Green
Mr. Lucas Mr. Boone *Mr. Henry Mr. Durham Mr. Dean
**Mr. Gaugh

English 15, 16—Composition and American Literature—Semesters 1 and 2 (3 and 0) 3 cr.

Purpose: To train the student in the use of correct, accurate, and effective language and to acquaint him with outstanding works of the major American authors. *Principal Topics:* Some review of principles of grammar and punctuation; principles of and practice in the various units of composition, especially the paragraph; letter writing; vocabulary; supplementary reading and classroom reports; selected works from the principal American authors. (*Century Collegiate Handbook*—Greever and Jones; *The College Reader*—Lovett and Jones; *Practice Handbook in English*—Jones; a dictionary.)

Mr. Lane Mr. Kinard Mr. Green
Mr. Lucas Mr. Boone *Mr. Henry Mr. Durham Mr. Dean
**Mr. Gaugh

English 21, 22—English Literature and Advanced Composition—Semesters 1 and 2 (2 and 0) 2 cr.

Prerequisite: English 15 and 16.

Purpose: To give the student a more intimate knowledge and appreciation of Nineteenth Century English literature; to cultivate his powers

*On leave 1938-1939.
**In place of Mr. Henry on leave.

of composition for accurate expression. *Principal Topics:* An intensive study of outstanding authors of the Romantic and Victorian periods of English literature; supplementary reading from the best authors; periodic themes based upon reading and other assignments; classroom discussion of themes; consultation with students for individual discussion. (*The Literature of England,* Vol. II—Watt, Wood and Anderson.)

Mr. Taylor Mr. Lane Mr. Kinard
Mr. Green Mr. Lucas

English 31—Public Speaking—Semester 1 (2 and 0) 2 cr.

Prerequisite: English 21 and 22.

Purpose: To train the student in the art of practical public speaking. *Principal Topics:* The improvement of pronunciation, enunciation, voice, and stage presence; outlining and delivery of original speeches; impromptu and extemporaneous speaking; debate; parliamentary practice. (*Better Speech*—Woolbert and Weaver.)

Mr. Daniel Mr. Bradley

English 32—Business Law—Semester 2 (2 and 0) 2 cr.

Prerequisite: English 21 and 22.

Purpose: To fix the principles of Business law in the student's mind with the view of helping him to avoid legal difficulties. *Principal Topics:* Origin and purpose of laws; contracts; agency; negotiable instruments; sales; personal and real property; cases. (*American Business Law*—Frey.)

Mr. Daniel Mr. Bradley

English 43, 44—Shakespeare—Semesters 1 and 2 (2 and 0) 2 cr.

Prerequisite: English 21 and 22.

Purpose: To give the student as comprehensive an acquaintance with the dramatic work of Shakespeare as possible. *Principal Topics:* A general approach to appreciation of plays from the point of view of the theater; Shakespeare's development as a dramatist; matters of character and presentation of individual plays. (A complete edition of Shakespeare's plays; *The Facts about Shakespeare*—Neilson and Thorndike.)

Mr. Taylor

English 45—News Writing—Semester 1 (2 and 0) 2 cr.

Prerequisite: English 21 and 22.

Purpose: To give additional training in English through the project method. *Principal Topics:* Gathering the news; kinds of news stories; structure and style; lead; reporting; interviewing; reports.

Mr. Daniel

English 46—Business English—Semester 2 (2 and 0) 2 cr.

Prerequisite: English 31 and 32.

Purpose: To give training in business customs and practices. *Principal Topics:* Business letters and forms; methods of approach; securing and conducting interviews; presenting plans and propositions; salesmanship; reports; developing a pleasing personality. (*Salesmanship*—Fernald.)

Mr. Daniel

English 47, 48—Chaucer—Semesters 1 and 2 (2 and 0) 2 cr.

Prerequisite: English 21 and 22.

Purpose: To give the student familiarity with the language, verse forms, and stories of Chaucer; to cultivate a grasp of fourteenth century thought and literary motivation. *Principal Topics:* (First Semester) Reading from the prologue and the Canterbury Tales with other short selections; supplementary reading from contemporary and later critical authors; term paper; (Second Semester). Detailed study of Troilus and Criseyde; term paper. (*The Works of Chaucer.*)

Mr. Bradley

English 49—Agricultural Journalism—Semester 2 (2 and 0) 2 cr.

Prerequisite: English 21 and 22.

Purpose: To give training in the fundamentals of journalism; to apply this training to the actual writing and publishing of agricultural copy. *Principal Topics:* Introductory study of the basic principles of journalism; detailed study of agricultural news story, feature story, editorial, and miscellany; periodic publication of agricultural news stories in country weeklies; publication of at least one feature story in an agricultural journal. (*Agricultural Journalism*—Crawford and Rogers.)

Mr. Bradley

ENGLISH 50—THESIS—Semester 1 (0 and 2) 2/3 cr.

Purpose: To give the student practice in making research and presenting the results in proper form. *Principal Topics:* Statement of the problem; object and scope of the investigation; history of the problem; possible application of results; plan of procedure. (To be prepared under the direction of a member of the School of General Science and approved as to content by him and as to form by a representative of the English department.)

MR. KINARD

ENGLISH 53, 54—INTRODUCTION TO DRAMA—Semesters 1 and 2 (2 and 0) 2 cr.

Prerequisite: English 21 and 22.

Purpose: To offer a systematic study of the principles and progress of drama from the time of Aeschylus to the present day. *Principal Topics:* Dramatic history and criticism, representative plays, the stage and theatrical conditions, the continental background of English drama, influence of life of the time on authors, actors and managers, written exercises in dramatic criticism, class discussions of new trends in legitimate drama and movies, controlled breathing, voice training, emotional expression, and the theory of acting. (*Introduction to Drama*—Hubbell and Beaty.)

MR. LANE

ENGLISH 57, 58—SELECTED MASTERPIECES FROM ENGLISH LITERATURE—Semesters 1 and 2 (2 and 0) 2 cr.

Prerequisite: English 21 and 22.

Purpose: To help students learn and appreciate a variety of literary masterpieces, selections not included in other courses at Clemson. *Principal Topics:* Selections studied vary with classes—a representative list for a semester: *Paradise Lost* (6 books); *Gulliver's Travels; Beowulf; Diary of Samuel Pepys* (selections); Boswell's *Johnson* (selections); Pope's *Iliad* (selections); *Tom Jones;* Bacon's essays; *Pilgrim's Progress.* (No general text. Cheap editions of some selections are bought.)

MR. KINARD

*ENTOMOLOGY**

Mr. Sherman Mr. Dunavan

Ent. 31—Introduction and Applied Entomology—Semester 1 (2 and 2) 2 2/3 cr.

Prerequisite: Zool. 12 or 21.

Purpose: To give agricultural students information concerning the structure, life-history, and habits of insects in general and to provide instruction in control of the principal injurious species. *Principal Topics:* Insect structure, metamorphosis, habits, characteristics of the principal orders of insects, methods of control of injurious forms. (*Applied Entomology*—Fernald.)

Mr. Sherman

Ent. 32—General Entomology—Semester 2 (2 and 4) 3 1/3 cr.

Prerequisite: Ent. 31.

Purpose: Designed especially for students who wish to choose Entomology as their life-work. The aim is to provide basic training in the general phases of Entomology. *Principal Topics:* Near relatives of insects; history of Entomology; insect metamorphosis; classification, habits, and characteristics of the members of the principal families in all orders of insects; technique of collecting and preserving insects. (*Manual for the Study of Insects*—Comstock.)

Mr. Dunavan

Ent. 41—Economic Entomology—Semester 1 (2 and 2) 2 2/3 cr.

Prerequisite: Ent. 31.

Purpose: To so equip the student that he will be able to recognize injurious species of insects and their damage and be able to control them intelligently. *Principal Topics:* Effect of cultivation on insect populations; peculiarities of field crops and their insect enemies; identification, life-history, and control of insect enemies of corn, wheat, oats, clover, alfalfa, peas, beans, tobacco, cotton, sugar cane, stored grain, cattle, horses, sheep, swine, poultry, and man. (*Destructive and Useful Insects*—Metcalf and Flint.)

Mr. Dunavan

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*Students who major in Entomology are required to take certain courses in Zoology which are listed under that subject. See Zoology.

ENT. 42—ECONOMIC ENTOMOLOGY—Semester 2 (2 and 2) 2 2/3 cr.

Prerequisite: Ent. 31.

Purpose: To train students in the recognition of fruit and vegetable insects and in methods of control of these pests. *Principal Topics:* Beneficial insects, history of insect control, host resistance, theory of insect control, chemistry and preparation of common insecticides, special requirements of control of fruit and vegetable insects, identification, life-histories, and control of insect enemies of apples, pears, peaches, plums, cherries, grape, bush fruits, strawberries, and all vegetable crops. (*Destructive and Useful Insects*—Metcalf and Flint.)

MR. DUNAVAN

ENT. 44—BEEKEEPING—Semester 2 (2 and 2) 2 2/3 cr.

Prerequisite: Ent. 31.

Purpose: To provide the student with the knowledge and actual practice of modern beekeeping which will enable him to become a successful beekeeper. *Principal Topics:* Activities of the colony, life-history and metamorphosis of bees, spring, fall and winter management; enemies of bees, swarm control, production of honey, methods of wintering. (*ABC and XYZ of Beekeeping*—Root.)

MR. DUNAVAN

ENT. 45—INSECT MORPHOLOGY—Semester 1 (2 and 2) 2 2/3 cr.

Prerequisite: Ent. 31 and 32.

Purpose: Designed especially for students majoring in Entomology. The aim is to give the student detailed knowledge of the external and internal morphology of insects. *Principal Topics:* Structure of the insect head, thorax, abdomen, and body appendages, structure of muscles, external and internal skeleton, alimentary canal, reproductive, respiratory, and nervous systems, structure and function of glands and sense organs, physiology of respiration and digestion. (Laboratory: *Anatomy of Insects* —Comstock & Kellogg.)

MR. DUNAVAN

ENT. 46—SYSTEMATIC ENTOMOLOGY—Semester 2 (1 and 4) 2 1/3 cr.

Prerequisite: Ent. 31 and 32.

Purpose: To give students specializing in Entomology training in identification of insects by the use of keys. *Principal Topics:* Theory of

nomenclature, philology of scientific names, important taxonomists of the past and present, detailed taxonomic study of selected groups of insects.

Mr. Sherman

Ent. 47—Parasitology—Semester 1 (2 and 2) 2 2/3 cr.

Prerequisite: Zoology 12 or 21 and Entomology 31.

Purpose: To give technical training in Human Parasitology. Special emphasis is placed on life-cycles of parasites and on identification of the insect carriers and transmitters of parasites. *Principal Topics:* Protozoa, flukes, tapeworms, roundworms, medical entomology.

Mr. Dunavan

Ent. 51 and 52—Seminar—Semesters 1 and 2 (1 and 0) 1 cr.

Prerequisite: Ent. 31 and 32.

Purpose: To train students specializing in Entomology in presenting short talks on scientific topics. To present miscellaneous information not given in regular courses but of value to professional Entomologists. *Principal Topics:* Study of various technical journals, lives of famous Entomologists, tropisms of animals, insect ecology.

Mr. Dunavan and other staff members.

Ent. 59—Introduction to Research—Semester 1 (1 and 2) 1 2/3 cr.

Prerequisite: Ent. 31 and 32.

Purpose: To familiarize the student with research methods in Entomology and to enable each student to gather data and write a graduation thesis. *Principal Topics:* Outlining a problem in research, bibliographic methods, graphic presentation of data, reviews of published papers on entomological technique, practical photography.

Mr. Dunavan

FRENCH

Mr. Rhyne Mr. Dean

French 11, 12—Beginner's French—Semesters 1 and 2 (3 and 0) 3 cr.

Purpose: To provide the student with a foundation upon which, by subsequent work, he can build up a reading knowledge of French. *Prin-*

cipal Topics: The fundamentals of grammar with emphasis on pronunciation and the learning of idioms, conversation and dictation. In the second semester a reader will be used.

Mr. Rhyne Mr. Dean

French 21, 22—Second-year French—Semesters 1 and 2 (3 and 0) 3 cr.

Purpose: To help the student acquire a reading knowledge of French, to appreciate some of the beauties of French literature, and to read scientific books. *Principal Topics:* Review of grammar, with especial attention to irregular verbs; conversation and dictation continued, prose readings from such authors as Balzac, Daudet, Dumas, Hugo, Loti, Maupassant and Merimee.

Mr. Rhyne

French 31, 32—Third-year French—Semesters 1 and 2 (2 and 0) 2 cr.

A course in rapid reading of literary or scientific prose.

Mr. Rhyne

GEOLOGY AND MINERALOGY

Mr. Calhoun Mr. Gee

Geol. 21—Agricultural Geology—Semester 1 (3 and 0) 3 cr.

Purpose: In this course the student is shown the relationships existing between geology and practical agricultural problems, especially those in connection with soil formation and adaptation. *Principal Topics:* Soil making minerals and rocks; formation of soils from rocks; the question of the relation of underground water to springs, wells, and artesian wells; drainage problems and soil water are considered. The soil series are taken up with relation to the rocks from which they are derived and the geologic agents which aid in their formation. (*Agricultural Geology*—Emerson.)

Mr. Calhoun

Geol. 23, 24—General Geology—Semesters 1 and 2 (3 and 0) 3 cr.

Purpose: To familiarize students with geology as applied not only to a thorough enjoyment of nature, but also to its many practical applications. *Principal Topics:* These courses emphasize topographic forms and their origin. The earth is considered first as a member of the solar system, and from this the evolution of the earth through all of its changes to the geography and life of the present day is traced. Special attention is given

to the study of topographic and geologic maps. (*Outlines of Geology*—Longwell, Knopf, Flint, Schuchert & Dunbar.)

Mr. Gee

Geol. 33, 34—Mineralogy—Semesters 1 and 2 (2 and 2) 2 2/3 cr.

Purpose: To give to students a comprehensive knowledge of crystallography, mineralogy, and blowpipe analysis. *Principal Topics:* The first semester is devoted to crystallography and optical mineralogy; the second is descriptive and determinative mineralogy. Crystallography is taught by lectures, with the laboratory work based on models and natural crystals. Mineralogy and blowpipe analysis enable the student to identify readily all but the rarer minerals. (*Blowpipe Analysis*—Moses and Parsons.)

Mr. Calhoun

Geol. 42—Meteorology—Semester 2 (2 and 0) 2 cr.

Purpose: A course designed to give the general principles of meteorology and climatology as applied to farming, aviation, and to those sciences which require a knowledge of such principles. *Principal Topics:* The course concerns itself in detail with those elements which control the weather, such as temperature, pressure, wind, humidity, clouds, and precipitation. The study of weather maps and conclusions to be drawn from them are made an important part of the course. (*Meteorology*—Milham.)

Mr. Calhoun

Geol. 43—Engineering Geology—Semester 1 (2 and 0) 2 cr.

Purpose: To show the practical application of geology to problems of engineering. *Principal Topics:* Materials from the earth's crust which the engineer must use; structural geology which gives an idea how such material is arranged; dynamic geology which emphasizes both those forces which tear the earth down and those which build it up. Topographic and geologic maps are used extensively in connection with the text. (*Elements of Engineering Geology*—Ries and Watson.)

Mr. Calhoun

GERMAN

Mr. Rhyne

German 11, 12—Beginner's German—Semesters 1 and 2 (3 and 0) 3 cr.

Purpose: To provide the student with a foundation upon which, by subsequent work he can attain a reading knowledge of German. *Principal*

Topics: The essentials of German grammar. Stress is laid on pronunciation, conversation, and drill in the fundamental constructions. Dictation is given throughout the year. In the second semester an elementary reader is used.

Mr. Rhyne

German 21, 22—Second-year German—Semesters 1 and 2 (3 and 0) 3 cr.

Purpose: To help the student to build up a reading knowledge of German, to appreciate some of the beauties of German literature, and to read scientific books. *Principal Topics:* Review of grammar; conversation and dictation continued; easy lectures in German; prose readings from such authors as Baumbach, Freytag, Hauff, Storm, and Wildenbruch.

Mr. Rhyne

German 31, 32—Third-year German—Semesters 1 and 2 (2 and 0) 2 cr.

A course of rapid reading of literary or scientific prose.

Mr. Rhyne

GOVERNMENT

Mr. Ward

Mr. Gates *Mr. Epting Mr. Kendrick Mr. Walker

Gov. 12—American National Government—Semester 1 or 2 (2 and 0) 2 cr.

Purpose: To acquaint the student with the system of American Federal Government. *Principal Topics:* The Constitution, Senate, House of Representatives, joint congressional activities, powers of Congress, President, executive departments, independent establishments, Judiciary, relation to the states and territories, citizenship, international relations, political parties.

Mr. Gates Mr. Kendrick Mr. Walker

Gov. 31—American Government and Political Parties—Semester 1 (3 and 0) 3 cr.

Not open to those who have had Government 12.

Purpose: To give the student a broad survey of the principles and practices of American government. *Principal Topics:* The Constitution,

*On leave 1938-1939.

citizenship and suffrage, political parties, the national executive, the Congress, the national judiciary.

Mr. Gates

Gov. 32—State and Local Government—Semester 2 (3 and 0) 3 cr.

Prerequisite: Government 12 or 31 and permission of the instructor.

Purpose: To familiarize the student with the way in which government is carried on by agencies other than the national government. *Principal Topics:* The place of the state in the nation, state and local administration, taxation, economic and social functions, county and municipal government, governmental problems in South Carolina.

Mr. Epting

Gov. 44—Comparative Government—Semester 2 (3 and 0) 3 cr.

Prerequisite: Government 12 and permission of the instructor.

Purpose: To acquaint the student with a few of the more important governmental systems of the world. *Principal Topics:* Historical development of present-day political institutions; current phases of governmental practice and policy, especially in Great Britain, Germany, Italy, and Russia.

Mr. Gates

HISTORY

Mr. Holmes

*Mr. Epting Mr. Kendrick Mr. Walker

History 14—American Economic History—Semester 1 or 2 (2 and 0) 2 cr.

Purpose: To teach the student to think in terms of economic and social forces. *Principal Topics:* Commercial Revolution of Europe of the fifteenth century, colonization, mercantilism, industrial revolution, economic aspects of the several American wars, the westward movement, transportation, rise of labor, decline of laissez faire, recent agricultural development. (*A History of American Economic Life*—Kirkland.)

Mr. Holmes Mr. Kendrick Mr. Walker

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*On leave 1938-1939.

History 31, 32—History of Civilization—Semesters 1 and 2 (3 and 0) 3 cr.

Prerequisite: Open only to Juniors and Seniors.

Purpose: To inform the student in a general way of all the outstanding civilizations of the past. *Principal Topics:* Egypt with its monuments and religion; Babylonian law and commerce; Aegean culture, introduction of the horse, iron, and Indo-European literature; Hellenic and Hellenistic cultures: art, literature, philosophy, science; Roman law, expansion, and civilization; the feudal system; medieval art; rise of modern states and capitalism; Age of Louis XIV; Age of Reason; modern science, industry and art. (*History of Civilization*—Thorndike.)

Mr. Holmes

History 42—The Development of South Carolina—Semester 2 (2 and 0) 2 cr.

Prerequisite: Permission of the instructor.

Purpose: To acquaint the student with the principal social and economic factors that have influenced the growth of the State. *Principal Topics:* Land disposal, systems of labor, racial and cultural groups, agriculture, industry, education, religion, social conflicts.

Mr. Holmes

HORTICULTURE

Mr. Musser

Mr. Newman *Mr. Andrews Mr. White Mr. Edmond

Hort. 22—General Horticulture—Semester 2 (2 and 3) 3 cr.

Purpose: To give the student training which will enable him to apply the fundamentals of plant growth to the growth and development of horticultural crops, with particular emphasis on the home orchard, home garden, and home beautification. *Principal Topics:* A review of fundamental plant processes and plant structures. The influence of temperature, light, water, and nutrients on vegetation and reproduction. A study of principal horticultural practices, including seedage, propagation, sites and soils, fertilization, plant growing, cultivating, harvesting, storing, marketing, and pest control. A study of principal horticultural crops,

*On Leave

including the fruit crops—their fruiting habits, training, pruning, and spraying; the vegetable crops, including their growth habits and methods for successful production; and the ornamental crops, including their place, selection, and arrangement in the home. (*General Horticulture*—Edmond, Andrews, and Musser.)

Mr. Musser Mr. Edmond Mr. White

Hort. 31—Plant Propagation and Nursery Management—Semester 1 (2 and 2) 2 2/3 cr.

Purpose: To give the student a thorough knowledge of the methods of managing a commercial nursery and propagating plants of all kinds. *Principal Topics:* Methods of propagation; time, manner, and material for making cuttings, temperature and media for rooting cuttings of ornamental trees, shrubs and flowering plants; propagating structures, soils, fertilizers, and management methods for commercial nurseries. Practical instruction given in field and greenhouse. (*The Modern Nursery*—Laurie and Chadwick.)

Mr. Newman

Hort. 32—Elementary Landscape Design—Semester 2 (2 and 2) 2 2/3 cr.

Prerequisite: Hort. 31.

Purpose: To give the student a practical course in general landscape gardening, a thorough knowledge of plant materials used in landscape designing. *Principal Topics:* Kinds of landscape gardens, principles of landscape art, improvement of home, school grounds, and park areas; mapping, designing, identification, an adaptation of decorative plants to landscape work. (Assigned references.)

Mr. Newman

Hort. 33—Principles of Vegetable Production—Semester 1 (2 and 2) 2 2/3 cr.

Prerequisite: Hort. 22.

Purpose: To give the student a knowledge of the basic principles underlying the methods used in growing vegetables. *Principal Topics:* Types and classification of vegetables, plant growing, forcing and forcing structures, seeds, use and value of the various fertilizer materials, trans-

planting, value of cultivation, irrigation, relation of water to quality, storage, review of important experimental work. (*Vegetable Crops*—Thompson.)

Mr. Edmond

Hort. 41—Systematic Pomology and Small Fruit Culture—Semester 1 (2 and 2) 2 2/3 cr.

Prerequisite: Hort. 22.

Part I—Systematic Pomology.

Purpose: To acquaint students with the many and varied characters of deciduous and citrus fruits, both plant and fruit; to classify and identify varieties. *Principal Topics:* The structure of fruit plants—roots, stems, leaves, flowers, fruit, etc.; physiological characters; methods of work in systematic pomology and of classification; habitat, history, color, form, structure, quality, flavor and use of pome, drupe, bramble and heath fruits, grapes, strawberries, currants and gooseberries, and various citrus fruits; judging and displaying fruits. (*Systematic Pomology*—Hedrick.)

Part II—Small Fruit Culture.

Purpose: To give the student a knowledge of the principles of production and preparation for market of small fruits. *Principal Topics:* Varieties, soils, sites, culture, fertilizers, harvesting, and preparation for marketing of grapes, strawberries, dewberries, blackberries, raspberries, and other small fruits. (*Small Fruits*—Shoemaker.)

Mr. Musser

*Hort. 43—The Breeding of Horticultural Crops—Semester 1 (2 and 2) 2 2/3 cr.

Purpose: To train the student to apply the principles of genetics to the improvement of horticultural crop plants. *Principal Topics:* Genetics and breeding practices; the technique of selection, varietal and species crossing, sterility, and incompatability, mutations and chimeras; the origin of new forms. (Assigned References.)

Mr. Edmond

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*Hort. 43 and Hort. 47 are given in alternate years. Hort. 47 will be offered in 1939-1940.

HORT. 45—LANDSCAPE DESIGN—Semester 1 (1 and 3) 2 cr.

Prerequisite: Hort. 31.

Purpose: To familiarize the student with plant materials used in landscape designing for home grounds, parks, and small estates. *Principal Topics:* Systematic study of trees, shrubs, and herbaceous plants used on landscape designs; practical problems to be worked with the same attention to details as is necessary in actual practice of landscape designing.

MR. NEWMAN

HORT. 46—ADVANCED LANDSCAPE DESIGN—Semester 2 (2 and 2) 2 2/3 cr.

Prerequisite: Hort. 31, 32, and 45.

Purpose: To prepare the student to engage in Landscape Designing as a profession. *Principal Topics:* Classification of trees, shrubs and flowering plants with special reference to their use in landscape designing; soils, manures and fertilizers; establishing and maintaining lawns on large estates; vines and other ground covers; detail estimates of cost of developing large landscape problems; advanced design. (Assigned references.)

MR. NEWMAN

*HORT. 47—NUT CULTURE AND SPRAYS AND SPRAYING—Semester 1 (2 and 2) 2 2/3 cr.

PART I—NUT CULTURE.

Purpose: To give the student a knowledge of the principles of production and preparation for market of the principal nut crops. *Principal Topics:* Propagation, varieties, soils, sites, cultural methods, pollination problems, fertilizers, harvesting, and grading of pecans, walnuts, filberts, and almonds. (Assigned references.)

PART II—SPRAYS AND SPRAYING.

Purpose: To give the students a working knowledge of the properties and application of fungicides and insecticides in the control of pests of horticultural crops. *Principal Topics:* Classes of fungicides and in-

*Hort. 43 and 47 are given in alternate years. Hort. 47 will be offered in 1939-1940.

secticides; their properties, effectiveness, influence on plant functions, costs, and the methods of application. (References.)

Mr. Andrews

Hort. 52—Commercial Pomology—Semester 2 (2 and 2) 2 2/3 cr.

Prerequisite: Hort. 22.

Purpose: To give the students a knowledge of the methods of establishing and managing a large fruit orchard. *Principal Topics:* Fruit bud formation, rest period, and water responses of fruit plants; fruit tree soils; fruit setting and self-unfruitfulness of the important fruits; orchard soil management and responses of various fruits to applications of fertilizers; fundamental principles of and response of fruit trees to pruning; effect of climatic differences; freezing of tissues and means of avoiding injury; harvesting, transportation, storage. (*Fundamentals of Fruit Production*—Gardner, Bradford and Hooker; *Orchard and Small Fruits*—Auchter and Knapp.)

Mr. Musser

Hort. 54—Truck Crops—Semester 2 (2 and 2) 2 2/3 cr.

Prerequisite: Hort. 22.

Purpose: To give the student a thorough knowledge of the truck industry with special reference to growing and market truck crops along the Atlantic coast. *Principal Topics:* Plant characteristics, varieties, soils, fertilizers, cover crops, water requirements, harvesting and preparation for market of asparagus, beans, cabbage, Irish potatoes, sweet potatoes, cantaloupes, watermelons, tomatoes, and various less important crops. (*Southern Vegetable Crops*—Ware; Assigned References.)

Mr. Edmond

Hort. 56—Landscape Design—Semester 2 (1 and 3) 2 cr.

Prerequisite: Hort. 31, 43.

Purpose: To give the student a thorough knowledge of and practical experience in landscape problems of large areas. *Principal Topics:* Civic improvements, mill villages, public buildings, squares, parks, storm water control, water courses, lakes, lawns, drives, and walks; trees and shrubs and their requirements; study of finished problems in Landscape Design, original problems, field work, and drafting.

Mr. Newman

HORT. 61-62—SPECIAL PROBLEMS—Semesters 1 and 2 (1 and 0) 1 cr.

Purpose: To give experience in interpreting and analyzing reports of recent horticultural investigations. *Principal Topics:* Recent research work on various phases of horticulture, methods of conducting investigations, preparation of report of investigations. (Assigned References from various sources.)

MR. MUSSER AND HORTICULTURE STAFF

MATHEMATICS

MR. MARTIN

MR. HUNTER MR. SHELDON MR. BURTON MR. EDWARDS
MR. COKER MR. BELL MR. KIRKWOOD MR. KELLY MR. MILLER

MATH. 11—PLANE TRIGONOMETRY—Semester 1 (5 and 0) 5 cr.

Prerequisite: Algebra and Plane Geometry.

Purpose: To give the student a thorough knowledge of the principles of plane trigonometry together with its various applications to related problems and exercises. *Principal Topics:* Trigonometric functions of an acute angle, reciprocal functions, functions of complementary angles, fundamental relations between the functions, functions of any angle; logarithms; the right triangle; solutions of problems in heights and distances, projections, forces, velocities, and accelerations, isosceles triangles, polygons, and related circles; oblique triangles, laws of sines, cosines, and tangents with their various applications in the solution of triangles; the functions of the sum and difference of two angles, the double angle, and the half angle; inverse functions and trigonometric equations. (*Plane Trigonometry and Analytic Geometry*—Sprague.)

MR. HUNTER MR. BURTON MR. SHELDON MR. EDWARDS
MR. BELL MR. COKER MR. KIRKWOOD MR. KELLY MR. MILLER

MATH. 12—COLLEGE ALGEBRA AND ANALYTIC GEOMETRY—Semester 2 (5 and 0) 5 cr.

Prerequisite: Mathematics 11.

Purpose: To drill the student on the fundamental principles of algebra which are absolutely essential in the pursuit of his higher mathematics and to give him a thorough knowledge of the working principles of analytic geometry. *Principal Topics:* The first month will be devoted to a

rapid review of the fundamental principles of algebra with special emphasis on the subjects which will come up in subsequent courses in mathematics. (*Advanced Algebra*—Graham and John; *Trigonometry and Analytic Geometry*—Sprague.)

Mr. Hunter Mr. Burton Mr. Sheldon Mr. Edwards
Mr. Bell Mr. Coker Mr. Kirkwood Mr. Kelly Mr. Miller

Math. 17, 18—First Year College Mathematics—Semesters 1 and 2 (3 and 0) 3 cr.

Prerequisite: Algebra and Plane Geometry.

Purpose: To prepare the student to cope with the problems arising in the general science and pre-medical courses. *Principal Topics:* A course similar to Mathematics 11, 12, and 15, treating the fundamental topics met with in the sciences. (*Trigonometry and Analytic Geometry*—Sprague.)

Mr. Hunter Mr. Sheldon Mr. Burton Mr. Edwards Mr. Kirkwood

Math. 21—Differential Calculus—Semester 1 (5 and 0) 5 cr.

Prerequisite: Mathematics 12.

Purpose: To give the student a thorough working knowledge of differential calculus and its various applications. *Principal Topics:* A study of the differentiation of algebraic and transcendental functions, successive differentiation and development of functions, functions of two variables, tangents, normals, and asymptotes, and application of the derivative in mechanics. (*The Calculus*—Granville, Smith, Longley.)

Mr. Martin Mr. Hunter Mr. Sheldon Mr. Burton
Mr. Edwards Mr. Coker

Math. 22—Integral Calculus—Semester 2 (5 and 0) 5 cr.

Prerequisite: Mathematics 21.

Purpose: To make the student proficient in solving the many problems that arise in this subject, especially those arising in the various branches of engineering. *Principal Topics:* Elementary forms of integration, integration of rational fractions, the definite integral, successive reductions, integration of two variables, geometric applications, multiple in-

tegrals, and practical problems arising in engineering subjects. (*The Calculus*—Granville, Smith, Longley.)

Mr. Martin Mr. Hunter Mr. Sheldon Mr. Burton
Mr. Edwards Mr. Coker

Math. 23—Differential Calculus—Semester 1 (3 and 0) 3 cr.

Prerequisite: Mathematics 12.

Purpose: To give those students taking the textile course the fundamental principles of differential calculus and some of its important applications. *Principal Topics:* Differentiation of algebraic and transcendental functions, with numerous applications in maxima and minima, curve tracing, and velocity and acceleration.

Mr. Sheldon Mr. Edwards Mr. Coker Mr. Bell

Math. 24—Integral Calculus—Semester 2 (3 and 0) 3 cr.

Prerequisite: Mathematics 23.

Purpose: To drill the student in fundamental principles and applications of integral calculus. *Principal Topics:* A study of the elementary form of integration, integration of rational fractions, the definite integral, geometric applications, multiple integrals, and practical problems arising in engineering subjects. (*The Calculus*—Granville, Smith, Longley.)

Mr. Sheldon Mr. Edwards Mr. Coker Mr. Bell

Math. 25, 26—Industrial Mathematics—Semesters 1 and 2 (3 and 0) 3 cr.

Purpose: To emphasize the practical side of Arithmetic, Geometry, Algebra, and Trigonometry. *Principal Topics:* Stress is to be placed upon the working of a great many problems from carpentry, the machine shop, construction work, surveying, and allied subjects, in order to obtain proficiency in carrying out a mathematical calculation and achieving the correct result. (*Practical Mathematics*—Palmer.)

Mr. Burton

Math. 31—Advanced Calculus—Semester 1 (2 and 0) 2 cr.

Open to juniors and seniors with a good grade in Math. 22.

Purpose: To give an understanding of the advanced calculus and its application to problems from physics, chemistry, and engineering. *Prin-*

cipal Topics: Double and triple integration, partial differentiation, development of a function in a series, approximations, curve fitting, curve tracing, indeterminate functions, etc.

Mr. Sheldon

Math. 32—Differential Equations—Semester 2 (2 and 0) 2 cr.

Open to juniors and seniors with a good grade in Math. 22.

Purpose: To give the student a working knowledge of the methods used to solve the elementary differential equations of engineering, chemistry, and physics. This course is intended for those who expect to do graduate work or who desire a greater knowledge of the methods employed in scientific and engineering problems. *Principal Topics:* Equations of the first order and first degree; linear equations with constant coefficients; certain particular forms of equations. (Kell's *Elementary Differential Equations.*)

Mr. Sheldon

MECHANICAL ENGINEERING

Mr. Earle

Mr. Fernow Mr. Curtis Mr. Sams Mr. Shenk Mr. Freeman
Mr. Marshall Mr. Philpot Mr. Downs Mr. Branch Mr. Chapman

M. E. 12—Forge and Foundry—Semester 1 or 2 (0 and 6) 2 cr.

Purpose: To give the student a knowledge of the methods of making iron and steel forgings for use in industry and the methods and practices in the making of ferrous and non-ferrous castings. A study of forge equipment; materials used in forgings; selection of materials; methods of working and treating, inspection, and classification of forgings. Part of the time is devoted to the study of tool steel forgings. A study of materials used in castings, the cupola, moulding sands, cores, patterns, the crucible furnace, the cleaning and inspection of castings. Time is also given to the study of the foundry from an industrial standpoint. Lectures and demonstrations accompany the work.

Mr. Philpot

M. E. 13—Woodwork—Semester 1 or 2 (0 and 2) 2/3 cr.

Purpose: A course in woodwork planned to familiarize agricultural students with the more common tools used in building and repairing of farm equipment. *Principal Topics:* Reading working drawings, making

out complete bill of materials, getting out rough stock for a job, measuring, laying out lines, squaring up stock, sawing to lines, planing to dimension, making and fastening common joints.

MR. MARSHALL

M. E. 15—WOODWORK—Semester 1 or 2 (0 and 2) 2/3 cr.

Purpose: A short course in woodwork consisting of lectures and shop practice for textile students. *Principal Topics:* Hand tools, sharpening tools, planing and squaring to dimensions, construction of common joints, gluing, and clamping.

MR. MARSHALL

M. E. 17—WOODWORK AND PATTERN MAKING—Semester 1 or 2 (0 and 6) 2 cr.

Purpose: To give Engineering students a knowledge of the tools and machinery used in woodwork and pattern making. This is accomplished through lectures and shop practice. *Principal Topics:* Hand tools, machine tools on planing and squaring to dimensions, common joints, miscellaneous constructions, gluing and clamping, wood turning and finishing, kinds of wood for various uses, source of supply, determination of types of patterns by the equipment of foundry and machine shop. Allowances and their effect on patterns, tools used, templets, core prints, pattern construction, core box and cores, skeleton patterns. (*Woodwork and Pattern Making*—Marshall.)

MR. MARSHALL

M. E. 21—METALLURGY—Semester 1 or 2 (2 and 0) 2 cr.

Prerequisite: Chemistry 11 and 12; *Suggested:* One year of Physics.

Purpose: To give the student an elementary knowledge of the metallurgy of Iron and Steel. *Principal Topics:* A study of ores and their sources; fluxes and heating mediums; the operation of the blast furnace; the open hearth, the Bessemer Converter; the crucible furnace; a study of the various alloys of iron, their production, and use. Some time is given to commercial processes of production. (Text to be selected.)

MR. PHILPOT

M. E. 22—MATERIALS OF ENGINEERING—Semester 1 or 2 (2 and 0) 2 cr.

Purpose: To give a brief but complete study of the materials used in Engineering and industry. *Principal Topics:* The sources of materials used in industry; a study of wood, concrete, ferrous alloys, non-ferrous

materials, brick, tile, and other building materials. This course is designed to help the engineer to select the proper material for any given job. (Text to be selected.)

Mr. Philpot

M. E. 23, 24—Machine Shop—Semesters 1 and 2 (0 and 3) 1 cr.

Prerequisite: Trigonometry, Mechanical Drawing.

Purpose: To give the student a practical knowledge of machine shop methods from the standpoint of the industrial engineer. *Principal Topics:* General application of bench tools; design, application, and methods employed with the lathe, drill, shaper, planer, milling machine, and grinder; study of highly specialized machinery in speed production work and study; practice in industrial management.

Mr. Freeman

M. E. 25—Engineering Problems—Semester 1 or 2 (0 and 3) 1 cr.

Prerequisites: Math. 11 and 12.

Purpose: To familiarize the student with simple problems of an engineering nature and to review applications of logarithms, trigonometric functions, parabolas, logarithmic plotting, steam tables and use of the slide rule.

Mr. Sams

M. E. 31—Mechanics (Statics)—Semester 1 (3 and 0) 3 cr.

Prerequisite: Math. 21 and 22; Physics 11 and 12.

Purpose: To give the students additional training in analysis. *Principal Topics:* Analytical methods of solution of statically determinate force systems, with application to engineering; study of center of gravity and moment of inertia of areas. (*Applied Mechanics*—Poorman.)

Mr. Curtis Mr. Quattlebaum

M. E. 32—Mechanics (Kinetics)—Semester 2 (3 and 0) 3 cr.

Prerequisite: M. E. 31.

Continuation of Course M. E. 31.

Principal Topics: Study of various types of motion, work, energy, and power, with engineering applications. (*Applied Mechanics*—Poorman.)

Mr. Curtis

M. E. 33—Mechanical Engineering—Semester 1 (3 and 0) 3 cr.

Prerequisite: Math. 21, 22; Physics 21, 22 or 11, 12.

Purpose: A general course to familiarize the student with mechanical equipment and its application to the needs of the civil engineer. *Principal Topics:* Study of fuels, combustion, steam, boilers and auxiliaries, steam engines, gas engines and elementary thermodynamics of the steam and gas cycles.

Mr. Shenk

M. E. 33a—Mechanical Laboratory—Semester 1 (0 and 2) 2/3 cr.

Prerequisite: Physics 21, 22 or 11, 12.

Purpose: Calibration of instruments, tests of fuels, steam engines, and gas engines. *Principal Topics:* Calibration of gauges, study of indicators, tests of coal, lubricating oils, boilers, turbines, steam engines, and gas engines.

Mr. Shenk Mr. Downs

M. E. 34—Mechanical Engineering—Semester 2 (3 and 0) 3 cr.

Prerequisite: Math. 21, 22; Physics 21, 22 or 11, 12.

Purpose: A general course to familiarize the student with mechanical equipment and its application to the needs of the textile engineer. *Principal Topics:* Study of fuels, steam boilers, and auxiliaries, steam and gas engines, and elementary thermodynamics of the steam and gas cycles.

Mr. Shenk

M. E. 34a—Mechanical Laboratory—Semester 2 (0 and 2) 2/3 cr.

Prerequisite: Physics 21, 22 or 11, 12.

Purpose: Calibration of instruments, tests of fuels, steam engines, and gas engines. *Principal Topics:* Calibration of gauges, study of indicators, tests of coal, lubricating oils, boilers, turbines, steam engines, and gas engines.

Mr. Shenk Mr. Downs

M. E. 35—Power Plants—Semester 2 (3 and 0) 3 cr.

Prerequisite: Math 21, 22.

Purpose: A study of mechanical equipment and its application in central station and industrial uses, stress being laid on the thermodynamic

feasibility of its use. *Principal Topics:* Fuels, combustion, steam boilers, boiler room auxiliaries, steam engines, and turbines with their auxiliaries.

Mr. Earle Mr. Sams

M. E. 35a—Mechanical Laboratory—Semester 1 (0 and 3) 1 cr.

Prerequisite: Physics 23, 24.

Purpose: To familiarize the student with the instruments used and method of making friction tests on engines. *Principal Topics:* Calibration of gauges, thermometers, study of indicators, analyses of coal gas, lubricating oils, and simple engine tests.

Mr. Shenk Mr. Downs

M. E. 36—Thermodynamics—Semester 1 (3 and 0) 3 cr.

Prerequisite: M. E. 35.

Purpose: A thorough study of the thermodynamics of steam, air heat, and refrigeration cycles. *Principal Topics:* Thermodynamic principles and definitions, properties and processes for gases, cycles of heat engines using gas, properties and thermodynamic processes of vapors, vapor cycles, flow of fluids, thermodynamics of refrigeration and compressed air cycles.

Mr. Earle Mr. Sams

M. E. 36a—Mechanical Laboratory—Semester 2 (0 and 3) 1 cr.

Prerequisite: Physics 21, 22.

Purpose: A continuation of M. E. 35a. *Principal Topics:* Friction tests and economy tests of steam and gas engines.

Mr. Shenk Mr. Downs

M. E. 36b—Mechanical Laboratory—Semester 2 (0 and 3) 1 cr.

Prerequisite: Physics 21, 22.

Purpose: To familiarize the student with mechanical equipment and the methods used in testing it. *Principal Topics:* Calibration of instruments, analyses of coal and lubricating oils, simple tests on steam and gas engines.

Mr. Shenk Mr. Downs

M. E. 38—Industrial Engineering—Semester 2 (2 and 0) 2 cr.

Prerequisite: M. E. 23, 24.

Purpose: To give the student a practical knowledge of the organization, management, and operation of the industrial plant. *Principal Topics:* Basic principles, design of the plant, organizing the company. Executive control, operating methods.

Mr. Freeman

M. E. 41—Power Plants—Semester 1 (2 and 0) 2 cr.

Prerequisite: M. E. 35, 36, 35a, 36a.

Purpose: To study the engineering of power plants. *Principal Topics:* The design and operating characteristics of power plants and of the individual units which make up the power plant, including the economics; steam, hydro, and Diesel plants.

Mr. Shenk

M. E. 41a—Power Plant Laboratory—Semester 1 (0 and 3) 1 cr.

Prerequisite: M. E. 35, 36.

Purpose: To put into practice the theory covered in M. E. 41. *Principal Topics:* Tests of turbines, engines, pumps, compressors, boilers, blowers, etc., (with formal written reports).

Mr. Sams

M. E. 42—Hydraulics—Semester 2 (3 and 0) 3 cr.

Prerequisite: M. E. 32.

Purpose: To familiarize students with forces exerted by water and the flow of water. *Principal Topics:* Theoretical study of pressure measurement, hydrostatic pressures, discharge measuring devices, flow in pipes and open channels; brief consideration of hydrodynamics, hydraulic turbines, and hydraulic power plants. (*Hydraulics*—Daugherty.)

Mr. Curtis

M. E. 42a.—Hydraulic Laboratory—Semester 2 (0 and 2) 2/3 cr.

To accompany M. E. 42.

Purpose: Experimental illustration by students of certain devices and principles studied in M. E. 42; also a limited number of exercises on testing of structural materials.

Mr. Curtis

M. E. 42.5—Hydraulics—Semester 2 (2 and 0) 2 cr.

Prerequisite: M. E. 32.

An abbreviated form of M. E. 42 without laboratory.

Mr. Curtis

M. E. 43—Power Plants—Semester 1 (3 and 0) 3 cr.

Prerequisite: M. E. 35, 36.

The same as M. E. 41, but more complete and detailed. (*Power Plant Engineering*—F. T. Morse.)

Mr. Fernow

M. E. 43a—Power Plant Laboratory—Semester 1 (0 and 4) 1 1/3 cr.

Prerequisite: M. E. 35a, 36a.

An amplification of M. E. 41a. (No text.)

Mr. Fernow

M. E. 44—Power Plants—Semester 2 (3 and 0) 3 cr.

Prerequisite: M. E. 43.

A continuation of M. E. 43. (*Power Plant Engineering*—F. T. Morse.)

Mr. Fernow

M. E. 44a—Power Plant Laboratory—Semester 2 (0 and 4) 1 1/3 cr.

A continuation of M. E. 43a. (No text.)

Mr. Fernow

M. E. 45—Gas Engines—Semester 1 (2 and 0) 2 cr.

Prerequisite: M. E. 35, 36.

Purpose: A study of the thermodynamics, construction, and design of internal combustion engines. *Principal Topics:* Theoretical cycles, engine performance, two and four stroke cycles, fuels, combustion, cooling, temperature effects, flywheels, governors, vibration and balancing, engine design.

Mr. Shenk

M. E. 45a—Gas Engine Design—Semester 1 (0 and 3) 1 cr.

Prerequisite: Drawing 26, M. E. 35, 36.

Purpose: The design and layout of an internal combustion engine. *Principal Topics:* To design and make an assembly drawing of an internal combustion engine.

Mr. Fernow

M. E. 46—Steam Turbines—Semester 2 (2 and 0) 2 cr.

Prerequisite: M. E. 35, 36.

Purpose: A study of the principles of operation, construction, and design of the steam turbine. *Principal Topics:* Nozzle design, blade design, staging, governing, economy, etc.

Mr. Earle

M. E. 46a—Steam Turbine Design—Semester 2 (0 and 3) 1 cr.

Prerequisite: Drawing 26; M. E. 35, 36. Registration in M. E. 46.

Purpose: To design and lay out various parts of the steam turbine. *Principal Topics:* Design of nozzle and blading, including assembly and general layout of turbine.

M. E. 47—Heating and Ventilation—Semester 1 (2 and 0) 2 cr.

Prerequisite: M. E. 35.

Purpose: To teach the rudiments of central heating system design and construction. *Principal Topics:* Optimum air conditions, heat loss determination, warm air systems, hot water systems, steam, vapor, and vacuum systems; fuels and fuel storage.

Mr. Shenk

M. E. 47a—Heating and Ventilation Design—Semester 1 (0 and 3) 1 cr.

Purpose: To give practical application to the principles of M. E. 47. *Principal Topics:* The design of three heating systems—one for a residence, one for a school building, and another for an industrial plant.

Mr. Shenk

M. E. 48—Heating and Ventilation—Semester 2 (2 and 0) 2 cr.

Prerequisite: M. E. 47.

Purpose: To teach the rudiments of air conditioning. *Principal Topics:* Physiological effects of air conditioning requirements, ventilation equipment, ventilation systems, application of automatic control; industrial exhaust systems.

Mr. Shenk

M. E. 48a—Heating and Ventilation Design—Semester 2 (0 and 3) 1 cr.

Purpose: To provide practical application of the principles of air conditioning systems. *Principal Topics:* The design of three air conditioning systems: one commercial, one industrial, and one for a hospital.

Mr. Shenk

M. E. 49—Mechanics of Materials—Semester 1 (3 and 0) 3 cr.

Prerequisite: M. E. 31.

Purpose: To acquaint students with certain physical constants and stresses in structural members and machine parts. *Principal Topics:* Deformation and stress; torsion; riveted joints; supports, flexure and deflection of a beam; combined stress in short blocks; columns. (*Strength of Materials*—Boyd.)

Mr. Curtis Mr. Quattlebaum

M. E. 50—Aerodynamics—Semester 2 (2 and 0) 2 cr.

Prerequisite: M. E. 31 and approval of instructor.

Purpose: To study the forces acting on a plane in flight. *Principal Topics:* History of aviation, aerodynamic theory as applied to airplane design, including calculations of performance and the study of stability and control.

M. E. 51—Refrigeration—Semester 1 or 2 (2 and 0) 2 cr.

Prerequisite: M. E. 35.

Purpose: To teach the application of thermodynamic principles to practical problems in refrigeration. *Principal Topics:* Thermodynamics of refrigeration, heat transfer through building materials and insulation, refrigeration requirements in ice making, meat packing, and in creamery, cold storage and household refrigeration machinery and systems; some economic factors of refrigeration.

Mr. Shenk

MILITARY SCIENCE

Colonel C. W. Weeks

Major A. H. Dumas
Major J. P. Gammon
Major R. F. Walthour
Major G. D. Hufford
Major D. E. Barnett

Sergeant H. J. Wilkinson
Sergeant K. R. Helton
Sergeant H. S. Heath
Sergeant O. A. deMott

M. S. 11, 12—Military Science and Tactics—Semesters 1 and 2 (0 and 3) 1 cr.

Purpose: To instill discipline and the habit of prompt obedience, and to develop leadership ability, while providing basic military instruction. *Principal Topics:* The course includes study of National Defense Act and ROTC, obligations of citizenship, military history and policy, current international situations, military discipline, courtesy and customs of the service, military sanitation and first aid, military organization, especially of the infantry, the theory and practice of military map reading and rifle marksmanship, instruction in command and leadership, guard duty and ceremonies. Physical drill is also given. (*National Service R. O. T. C. Manual,* Volume 1.)

Major Dumas Major Barnett Major Hufford

M. S. 21, 22—Military Science and Tactics—Semesters 1 and 2 (0 and 3) 1 cr.

Prerequisite: M. S. 12.

Purpose: Continuation of disciplinary training, additional stress on leadership, and basic instruction in infantry weapons and tactics of the smaller infantry units. *Principal Topics:* This course covers in theory and practice the automatic rifle, characteristics of infantry weapons, scout-

ing and patrolling, musketry and combat principles of the rifle squad and section; additional military history, command and leadership as would apply to infantry corporals and squad leaders, physical training and instruction in guard duty and ceremonies. (*National Service R. O. T. C. Manual,* Volume II.)

MAJOR GAMMON

M. S. 31, 32—MILITARY SCIENCE—Semester 1 (0 and 3) 1 cr. Semester 2 (0 and 2) 2/3 cr.

Purpose: Training in Discipline and Leadership; physical development and correction of defects in posture. *Principal Topics:* Drill (close and extended order)—command and leadership. Juniors who are not members of the ROTC receive practical instruction in Military Science and Tactics. Members of the ROTC also take M. S. 33 and 34.

COL. WEEKS MAJOR HUFFORD MAJOR WALTHOUR
MAJOR GAMMON MAJOR DUMAS MAJOR BARNETT
SERGEANT WILKINSON SERGEANT HELTON
SERGEANT HEATH SERGEANT DEMOTT

M. S. 33, 34—MILITARY SCIENCE AND TACTICS—Semester 1 (2 and 0) 2 cr. Semester 2 (3 and 0) 3 cr.

Prerequisite: M. S. 22.

Purpose: Theoretical and practical training in weapons and the principles of their combined action, disciplinary and combat training, leadership, and training methods, to qualify as instructors. *Principal Topics:* This course consists of practical and theoretical training in aerial photograph reading; combat principles of rifle, machine gun and howitzer platoons; pistol and pistol marksmanship; rifle and rifle marksmanship; command and leadership as would apply to infantry sergeants, first sergeants and sergeant majors; instruction in guard duty, physical drill and ceremonies, and in the duties of the senior non-commissioned officers. (*National Service R. O. T. C. Manual,* Volume III.)

MAJOR WALTHOUR MAJOR DUMAS

M. S. 41, 42—MILITARY SCIENCE—Semester 1 (0 and 3) 1 cr. Semester 2 (0 and 2) 2/3 cr.

Purpose: Training in discipline and leadership as applies to the junior officer; physical development and correction of defects of posture. *Principal Topics:* Drill (close and extended order), command and leadership. Seniors who are not members of the ROTC receive practical instruction

in Military Science and Tactics. Members of the ROTC take M. S. 43 and 44.

Col. Weeks Major Hufford Major Walthour
Major Gammon Major Dumas Major Barnett
Sergeant Wilkinson Sergeant Helton
Sergeant Heath Sergeant deMott

M. S. 43, 44—Military Science and Tactics—Semester 1 (2 and 0) 2 cr. Semester 2 (3 and 0) 3 cr.

Prerequisite: M. S. 34.

Purpose: Instruction in command, leadership, and combat principles; development of initiative and responsibility; administration and training methods; qualification as Junior Officers of the Infantry arm. *Principal Topics:* This course comprises a study of Military History and Policy, Military Law, company administration and supply, Officers Reserve Regulations; tanks, anti-aircraft defense, defense against chemical warfare; combat intelligence, Infantry Signal Communications; Combat Training; principles of rifle, machine gun, and howitzer platoons and companies; command and leadership as would apply to infantry lieutenants. (*National Service R. O. T. C. Manual,* Volume IV.)

Colonel Weeks Major Barnett

PHYSICS

Mr. Godfrey
Mr. Brown Mr. Reed Mr. Hendricks Mr. Huff
Mr. Orens Mr. Vandivere

Physics 11, 12—General Physics—Semesters 1 and 2 (3 and 2) 3 2/3 cr.

Prerequisite: Algebra, through quadratics; Plane Geometry.

Purpose: To give the student a knowledge of the fundamental principles of physics and to apply these principles to numerous problems. *Principal Topics:* The laws of motion of solids and fluids, heat, thermometry, the principles of electricity, magnetism, sound, and light.

Mr. Godfrey Mr. Hendricks Mr. Huff Mr. Orens Mr. Vandivere

PHYSICS 13, 14—GENERAL PHYSICS—Semesters 1 and 2 (3 and 3) 4 cr.

Prerequisite: Algebra, through quadratics; Plane Geometry.

Purpose: To study the fundamental principles of physics and to apply these principles especially to the methods and processes used in the medical profession.

MR. REED

PHYSICS 21, 22—GENERAL PHYSICS—Semesters 1 and 2 (4 and 0) 4 cr.

Prerequisite: Mathematics 11 and 12.

Purpose: To give the student a knowledge of the fundamental theory of physics and the application of the principles to problems in engineering. *Principal Topics:* Mechanics, dynamics, thermometry, heat, magnetism, electricity, sound, and light.

MR. BROWN MR. HENDRICKS MR. HUFF

PHYSICS 23, 24—LABORATORY PHYSICS—Semesters 1 and 2 (0 and 3) 1 cr.

This course must be taken with Physics 21, 22.

Purpose: To study the application of the theory in physical phenomena, acquire skill in observation and manipulation. *Principal Topics:* Measurement of several physical constants in mechanics, heat, and light; study of electrical measurements and instruments.

MR. BROWN MR. HUFF MR. HENDRICKS MR. ORENS

PHYSICS 27—GENERAL PHYSICS—Semester 1 (3 and 2) 3 2/3 cr.

Purpose: To study the fundamental principles of Physics as applied to problems in agriculture. *Principal Topics:* Work, power, machines, efficiency, osmosis, surface tension, heat and heat engines, magnetism, electricity, and light.

MR. REED MR. ORENS MR. VANDIVERE

PHYSICS 29—GENERAL PHYSICS—Semester 1 or 2 (3 and 4) 4 1/3 cr.

Purpose: A short course for students of agriculture with especial reference to the applications of physics. *Principal Topics:* Force, acceleration, power, machines, heat, light, sound, magnetism, and electricity.

MR. ORENS MR. REED

PHYSICS 31, 32—MODERN PHYSICS—Semesters 1 and 2 (3 and 0) 3 cr.

Prerequisite: Physics 21, 22; *Suggested:* Mathematics 21, 22.

Purpose: To give the student a general knowledge of the more recent developments in physics and to familiarize him with the modern methods of investigation. *Principal Topics:* Kinetic theory of gases, electron theory, X-rays, radio activity, atomic structure, theory of quanta, cosmic rays, geophysics, astrophysics, radio, and television. (*Modern Physics*—Jauncey.)

MR. HUFF

PHYSICS 33—DESCRIPTIVE ASTRONOMY—Semester 1 or 2 (2 and 0) 2 cr.

Prerequisite: General Physics.

Purpose: To give a general knowledge of the facts of astronomy and to study the methods of determining latitude and longitude. *Principal Topics:* Coordinate systems and apparent motions, the planets, the sun and moon, properties of the stars. (*Introduction to Astronomy*—Baker.)

MR. GODFREY

PHYSICS 34—MAGNETISM AND ELECTRICITY—Semester 2 (3 and 0) 3 cr.

Prerequisite: Physics 11 and 12.

Purpose: A course primarily for students in Agricultural Engineering. *Principal Topics:* The electric and magnetic field, potential, transformers, properties of transmission lines, storage batteries, properties of vacuum tubes.

MR. REED

PHYSICS 35—MECHANICS AND PROPERTIES OF MATTER—Semester 2 (2 and 0) 2 cr.

Prerequisite: General Physics.

Purpose: A further study of the mechanical properties of matter. *Principal Topics:* The motion of particles and of rigid bodies, gyroscopes, elasticity, surface tension, the flow of fluids, gravitation.

MR. HUFF

PHYSICS 36—HEAT—Semester 2 (2 and 0) 2 cr.

Prerequisite: General Physics.

Purpose: To give the student a thorough knowledge of the fundamental principles of heat measurements. Emphasis is placed on chemical applications. *Principal Topics:* Thermometry, calorimetry, change of state, kinetic theory of gases, elements of thermodynamics.

MR. HENDRICKS

PHYSICS 37—SOUND AND LIGHT—Semester 2 (2 and 0) 2 cr.

Prerequisite: General Physics.

Purpose: To study the laws governing the transmission of sound and light. Emphasis is placed on architectural applications. *Principal Topics:* Wave motion; velocity of sound in air and other media; sound in rooms; laws of optics, mirrors, prisms, and lenses; wave nature of light; polarization.

MR. BROWN

PHYSICS 38—PHOTOGRAPHIC SURVEYING—Semester 2 (2 and 0) 2 cr.

Prerequisite: C. E. 21, 22.

Purpose: To study the use of photography in land surveying and map making.

MR. HUFF

POULTRY HUSBANDRY

MR. MORGAN

P. H. 32—FARM AND COMMERCIAL POULTRY PRODUCTION—Semester 2 (2 and 2) 2 2/3 cr.

Purpose: To study the fundamental principles of poultry production and the factors necessary for profitable flock management as a farm enterprise and a commercial business. *Principal Topics:* The nature and uses of poultry products, scope of the industry and agencies involved; classification of poultry; structure of fowl; fundamentals of flock improvement, culling and judging; incubation, brooding, feeding principles and practices; poultry house construction; disease control and sanitation, and economic aspects of poultry production. (*Poultry Husbandry*—Jull.)

MR. MORGAN

P. H. 41—Poultry Judging and Breeding—Semester 1 (2 and 2) 2 2/3 cr.

Prerequisite: Poultry Husbandry 32 and Genetics.

Purpose: To give the fundamental principles and practices in judging poultry for production and show, to study the principles of poultry breeding. *Principal Topics:* History and development of culling and judging for production, bases of poultry classification and standard judging, inheritance in poultry and improvement of birds through the application of genetic laws. (*Poultry Breeding*—Jull.)

Mr. Morgan

P. H. 42—Poultry Production and Management—Semester 2 (2 and 2) 2 2/3 cr.

Prerequisite: Poultry Husbandry 32.

Purpose: To give detailed study to incubation and brooding principles and practices, to study the effects of various feeds and rations, study of management practices. *Principal Topics:* Temperature, humidity, and ventilation in relation to incubation; incubator operation; brooding and rearing methods; feeds and rations for baby chicks; growing stock, breeding stock, and laying hens; effects of feeds and rations on the character and quality of poultry products; poultry farm plan and management. (*Research Bulletins and Scientific Literature.*)

Mr. Morgan

PSYCHOLOGY

Mr. Brearley

Psychology 35, 36—Psychology for Teachers—Semesters 1 and 2 (2 and 2) 3 cr. each semester.

Prerequisite: Junior standing.

Purpose: To acquaint students of education and others with some fundamental characteristics of human behavior. *Principal Topics:* Physiological bases of behavior, mental growth, the emotions and their expression, the learning process, individual differences and their measurement, personality, problem children, abnormal behavior. (*Psychology for Students of Education*—Gates; *Personality, Its Development and Hygiene* —Richmond.)

Mr. Brearley

Psychology 46—Abnormal Behavior—Semester 2 (3 and 0) 3 cr.

Prerequisite: Psychology 35.

Purpose: To develop a general knowledge of abnormal behavior. *Principal Topics:* Mental defect, the psychoses and psychoneuroses, psychopathic personalities.

Mr. Brearley

Psychology 47—Social Psychology—Semester 1 (2 and 0) 2 cr.

Prerequisite: Psychology 35.

Purpose: To study the social behavior of the individual. *Principal Topics:* The development of personality, social stimulation, crowd behavior, pro-social, and anti-social conduct.

Mr. Brearley

*RELIGION**

Mr. Crouch Mr. Goode

Religion 21, 22—Old Testament—Semesters 1 and 2 (2 and 0) 2 cr.

Free elective for Sophomores. Others admitted by permission.

Purpose: To introduce the student to the Old Testament, its history, inspiration, and interpretation. *Principal Topics:* The books of the Old Testament studied from the standpoint of origin, literary form, and content in their historical setting. Some time will be given to their religious and ethical teachings.

Religion 23, 24—Life of Christ—Semesters 1 and 2 (2 and 0) 2 cr.

Free elective for Sophomores. Others admitted by permission.

Purpose: To acquaint the students with the facts in the life of Christ in the order of their occurrence. *Principal Topics:* Historical study of the Gospels: their parallelism, the similarity and differences in the four narratives, brief glance at synoptic criticism, authorship and historical value of the Gospel of John, the measure of the importance and influence of facts studied, and a brief analysis of the more important of Christ's discourses. (*A Harmony of the Gospels*—Robertson.)

Mr. Goode

*This work is not financed by the College; it is offered as free elective.

Religion 31, 32—New Testament Outline—Semesters 1 and 2 (2 and 0) 2 cr.

Free elective for Juniors. Others admitted by permission.

Purpose: To study the beginning and the spread of Christianity during the New Testament period. *Principal Topics:* Conditions in the Roman world at the beginning of the Christian era; those factors which later aided in the spread of the Gospel; a study of the life and works of Jesus Christ, as the Founder of Christianity, according to Matthew's Gospel; the spread of the Gospel as contained in the Acts of the Apostles and the Epistles.

Mr. Crouch

Religion 41, 42—Ethics in Religion—Semesters 1 and 2 (2 and 0) 2 cr.

Free elective for Seniors. Others admitted by permission.

Purpose: To give a general knowledge of the history and development of religious and moral ideals. *Principal Topics:* The nature and scope of conduct, the relationship of man's conduct to his religious loyalties, the inseparable connection between religious and moral ideals. The historical development: Pre-Christian, Greek, Roman, Hebrew; the ethics of Jesus; further development of ethical ideals in the life of the church, modern theories of life.

SOCIOLOGY

Mr. Brearley Mr. Crouch

Sociology 31—Elementary Sociology—Semester 1 or 2 (2 and 0) 2 cr.

Prerequisite: Junior standing.

Purpose: To give an introduction to sociology and contemporary social problems. *Principal Topics:* Group behavior, the family, population problems, race relations, dependency, crime. (*Introduction to Sociology*—Young.)

Mr. Brearley

Sociology 43—International Relations—Semesters 1 and 2 (2 and 0) 2 cr.

Free elective for Seniors.

Purpose: To acquaint the student with current world movements and conditions, so that he may be able to think intelligently on the problems

confronting our own nation. *Principal Topics:* Economics, political and racial problems. (*The Great Powers in World Politics*—Simonds and Emeny.)

Mr. Crouch

Sociology 41—Criminology—Semester 1 (2 and 0) 2 cr.

Prerequisite: Sociology 31.

Purpose: To introduce the student to the principal problems of crime and its treatment. *Principal Topics:* The nature and sources of crime, the administration of criminal justice, systems of penology.

Mr. Brearley

Sociology 42—The Family—Semester 2 (2 and 0) 2 cr.

Prerequisite: Sociology 31 and permission of the instructor.

Purpose: To assist the student in developing perspective concerning the problems of marriage and family life. *Principal Topics:* History of the family, social problems of the family, conservation of the family, sources of failure and success in marriage.

Mr. Brearley

Sociology 44—Advanced Sociology—Semester 2 (3 and 0) 3 cr.

Prerequisite: Sociology 31 and permission of the instructor.

The purpose and topic of this course will be adjusted to the interests of the class and will vary from year to year.

Mr. Brearley

TEXTILE CHEMISTRY AND DYEING

Mr. Lindsay Mr. Huckabee Mr. Hicks

T. C. 31 and 32—Textile Chemistry—Semesters 1 and 2 (2 and 2) 2 2/3 cr.

Prerequisite: Chemistry 12.

Purpose: This course is designed to give the student the general knowledge of the subject that is essential to the management of any modern textile plant. *Principal Topics:* A general introduction into the theory of textile chemistry. Particular attention is given to the textile fibers, dyestuffs, and organic compounds used in the textile and related industries. (*Introduction to Organic Chemistry*—Lowy and Harrow; *T. C. Mimeograph Notes.*)

Mr. Huckabee Mr. Hicks

T. C. 33 and 34—Technical Writing—Semesters 1 and 2 (1 and 0) 1 cr.

Purpose: A course designed to familiarize the student with the technical literature. *Principal Topics:* Patents, particularly in the field of chemistry as applied to textiles, dyes, dyeing, finishing, rayon, and related subjects; literature searches; abstracting of technical literature and patents; report writing; technical nomenclature, etc.

Mr. Lindsay

T. C. 35 and 38—Textile Chemistry—Semesters 1 and 2 (4 and 3) 5 cr.

Prerequisite: Chemistry 12, 23 and 24.

Purpose: This course is designed particularly for textile chemists in that it covers the theories of formation and chemical behavior of the products used in bleaching, dyeing, and finishing. *Principal Topics:* A systematic and thorough course emphasizing especially the more complex compounds used in the textile industry such as carbohydrates (cellulose and starches); proteins (silk and wool); azo; anthraquinone and other similar compounds (dyestuffs); enzymes and ferments (desizing products).

Mr. Huckabee

T. C. 39 and 40—Dyeing—Semesters 1 and 2 (0 and 2) 2/3 cr.

Purpose: A laboratory course in dyeing with occasional lectures, intended primarily for students specializing in Weaving and Design or Yarn Manufacture. *Principal Topics:* The methods of bleaching and dyeing the different types of fibers are taught through laboratory experiments. Color-matching and evaluation of dyestuffs are considered briefly. (*T. C. Mimeograph Notes.*)

Mr. Lindsay

T. C. 41 and 42—Textile Chemistry and Dyeing—Semesters 1 and 2 (2 and 2) 2 2/3 cr.

Prerequisite: Textile Chemistry 32, 38.

Purpose: This course is designed to give Textile Engineers a general knowledge of the subject. *Principal Topics:* A general study of the chemistry of the textile fibers, dyestuffs and their application, detergents and scouring, bleaching, sizing preparation and its application, desizing, mercerizing, finishing, etc. While covering all of the fibers, particular attention is given to cotton. (*Dyeing with Coal Tar Dyestuffs*—Whittaker; *T. C. Mimeograph Notes.*)

Mr. Lindsay Mr. Hicks

T. C. 41.5 and 42.5—Textile Chemistry and Dyeing—Semesters 1 and 2 (4 and 4) 5 1/3 cr.

Prerequisite: Textile Chemistry 38 or Chemistry 36.

Purpose: An advanced course in the subject for those desiring to become textile chemists or dyers. *Principal Topics:* This course comprises a full and complete study of the textile fibers, the action of the various reagents upon them, and the various processes through which they pass in the different stages of textile manufacture. Application of dyes to the different classes of textile fibers is fully covered in the laboratory by the usual dyepot experiments, and also by larger scale dyeings. (*Dyeing with Coal Tar Dyestuffs*—Whittaker; *The Application of Dyestuffs*—Matthews; *T. C. Mimeograph Notes.*)

Mr. Lindsay

T. C. 43—Cellulose Chemistry—Semester 1 (2 and 0) 2 cr.

Prerequisite: Textile Chemistry 35.

Purpose: To give the student a thorough knowledge of the latest theories regarding the constitution of our most common and important textile fiber. *Principal Topics:* A study of the chemistry of cellulose based upon the latest research. Particular attention is paid to the preparation of wood pulps for the manufacture of rayon and paper. (*Chemistry of Cellulose and Wood*—Schorger.)

Mr. Lindsay

T. C. 45 and 46—Analysis of Textile Materials—Semesters 1 and 2 (1 and 3) 2 cr.

Prerequisite: Chemistry 24 and Textile Chemistry 38.

Purpose: To prepare the student to make analyses pertaining to the materials used in the textile and related industries. *Principal Topics:* The technical analysis of the various chemicals and materials used in the textile industry, including yarns and fabrics, water, soap, sizes, finishes, oils, etc., and hydrogen ion determinations by the colorimetric and potentiometric methods. (*Technical Methods of Analysis*—Griffin.)

Mr. Hicks

T. C. 47 or 46.5—Microscopy of Textile Materials and Chemicals —Semester 1 or 2 (1 and 1) 1 1/3 cr.

Purpose: This course is especially planned to enable the student to utilize this valuable means of investigation in the textile and related industries. *Principal Topics:* The preparation of the various materials used

in the textile industry for microscopic examination, photo-micrography, micrometry, etc. (*Textiles and the Microscope*—Schwarz; *T. C. Mimeograph Notes.*)

Mr. Hicks Mr. Huckabee

T. C. 48—Synthetic Fiber Chemistry—Semester 2 (2 and 0) 2 cr.

Prerequisite: Cellulose Chemistry.

Purpose: To equip the student with the knowledge essential to the undertaking of the work in the synthetic fiber industry. *Principal Topics:* A study of the chemistry and mechanics involved in the manufacture of the various synthetic fibers; the chemical, physical and textile properties of the various products, etc. (*Artificial Silk*—Reinthaler and Rowe; *T. C. Mimeograph Notes.*)

Mr. Lindsay

T. C. 50 and 51—Thesis—Semesters 1 and 2 (0 and 3) 1 cr.

Purpose: To determine the ability of the student to initiate and satisfactorily complete an advanced problem generally related to some work he wishes to pursue after graduation. *Principal Topics:* An investigation of an assigned problem relating to textile chemistry, dyes or dyeing, including the preparation of a written report of this work. When the student has already decided upon some work which he will follow after graduation, an effort is made to assign the investigation to this or a closely related subject.

Mr. Lindsay

Division Rooms and Equipment.—All work in textile chemistry and dyeing is conducted in the class room laboratory and dye-house, both especially provided for this purpose.

Besides the usual dyeing laboratory equipment, the dye house contains a hydroextractor, Franklin process and Columbus package dyeing machines (one of which is also suitable for bleaching purposes), a Hussong skein dyeing machine, a jigger, a printing machine, a Permutit water softening system, fadeometer, spectroscope, potentiometric and colorimetric hydrogen ion concentration determination equipment, special rubber-lined rayon dyeing equipment, spray printing equipment, launder-o-meter, Rodney Hunt kier; Rodney Hunt piece goods dyeing machine; monel metal tanks; Strickland monel metal hosiery dyeing machine; Philadelphia Metal Drying Forms for hosiery, etc.

VETERINARY SCIENCE

Mr. Feeley

Vet. Sci. 41—Anatomy and Physiology—Semester 1 (2 and 2) 2 2/3 cr.

Purpose: To give agricultural students a general knowledge of anatomy and physiology of farm animals. *Principal Topics:* Physiology of digestion, chemical and physical processes of digestion and absorption, common diseases, farm sanitation, and first aid treatment. (*Veterinary Science*—Hadley.)

Mr. Feeley

Vet. Sc. 42—Diseases of Animals—Semester 2 (2 and 2) 2 2/3 cr.

Purpose: To give agricultural students instruction in the recognition, causes, and treatment of the diseases of farm animals. *Principal Topics:* The principles of etiology, pathology, diagnosis, symptoms, and treatment of infectious and non-infectious diseases.

Mr. Feeley

VOCATIONAL EDUCATION

Mr. Washington
Mr. Crandall Mr. Monroe Mr. Bowen Mr. Booker
Mr. Tate Mr. Stribling Mr. Johnson Mr. Brock
Mr. White Mr. Kirkley Mr. Kirchner
Mr. Alexander

Voc. Ed. 11—Orientation—Semester 1 (1 and 0) 1 cr.

Purpose: To aid the freshman in adjusting himself to the College environment and his course of study.

Mr. Washington Mr. Crandall Mr. Booker Mr. Tate

Voc. Ed. 21—Introduction to Education—Semester 1 (2 and 0) 2 cr.

Purpose: To develop a broad concept of education and a comprehensive view of the scope and opportunities in teaching, to set up desirable objectives for education and to develop a desire for professional growth. *Principal Topics:* Scope, meaning, and significance of education, more significant aspects of teaching, teaching and learning principles, efficient study procedure, professional education's contributions to the successful work of the teacher, teacher personality traits, individual differences and teaching, outcomes of education, status of teaching profession, major problems of education.

Mr. Brock

Voc. Ed. 22—Introduction to Vocational Education—Semester 2 (1 and 0) 1 cr.

Purpose: To introduce the student to the field of education as a whole and to develop a background for further educational training. *Principal Topics:* The place of vocational education in the educational system, the subject-matter fields related to the vocation for which the student is planning to become a teacher, the place of the teacher in the community.

Mr. Crandall Mr. Brock

Voc. Ed. 28—Observation of Industrial Teaching—Semester 2 (0 and 3) 1 cr.

Purpose: To give the student a practical acquaintance with the duties of the industrial arts teacher.

Mr. Tate Mr. Brock

Voc. Ed. 30—Educational Psychology—Semester 2 (3 and 0) 3 cr.

Purpose: To train students to better meet the problems encountered in schools. *Principal Topics:* The learning process, individual differences as affecting educational and vocational performances, the project method of teaching, securing and maintaining interest, discipline, program planning, selecting teaching units, job analysis, developing lesson plans, grading, relation of the teacher to local school authorities, supervisors, and other school officials. The psychology applied to conference leading, adult teaching, and the interview, with special emphasis on vocational implications.

Mr. Stribling

Voc. Ed. 31—Introduction to Agricultural Education—Semester 1 (1 and 6) 3 cr.

Purpose: To familiarize students with the work of teachers of agriculture in local communities. *Principal Topics:* Students observe and report on the work of all-day, part-time, evening and day unit classes, community and promotional work, equipment and general organization of a program in agricultural education for a local community. Each trainee develops several units of teaching content and instructs classes in vocational agriculture. Students spend two afternoons each week in the practice department.

Mr. Crandall Mr. Monroe Mr. Stribling Mr. Johnson Mr. Bowen

Voc. Ed. 31.6, 32.6—Special Methods in Industrial Arts—Semesters 1 and 2 (2 and 2) 2 2/3 cr.

Purpose: To give the student fundamental skills, knowledges, and shop content in woodwork, to give the special technique and method of approach in teaching shop subjects in high schools. *Principal Topics:* Project construction, finishing, construction, and care of shop tools and equipment, materials, characteristics of woods, fasteners, finishing materials, glues, the shop budget. These topics are taken up from the standpoint of the most progressive methods of shop teaching in industrial arts.

Mr. Marshall

Voc. Ed. 32—Organization of Courses of Study—Semester 2 (3 and 0) 3 cr.

Purpose: To have students build industrial courses based upon specific analyses of the jobs to be taught, and to have students use these courses in teaching. *Principal Topics:* Purpose, scope, and use of job analyses in writing courses of study, writing and using instruction sheets for teaching, constructing achievement tests in industrial subjects. The student is required to select some industrial subject and write a course of study based upon analyses of jobs covered under that subject. Prospective teachers are urged to select subjects which they expect to teach later.

Mr. Brock

*Voc. Ed. 33—Fundamentals of Physical Education—Semester 1 (3 and 0) 3 cr.

Purpose: To give the student a knowledge of the basic principles underlying the promotion of an adequate program of physical education. *Principal Topics:* The place of physical education in the curriculum of the modern school. The relation of physical education to the scheme of general education. The part that anatomy, physiology, hygiene, sociology, psychology and like sciences have to do with a successful physical education program. Methods of motivating physical education are stressed.

Mr. Kirchner

Voc. Ed. 33.5, 34.5—Art Metal Work—Semesters 1 and 2, 1—3 cr.

Purpose: This course is primarily for industrial education students and others who plan to teach art metal courses in public schools and who would like to become acquainted with the making of plates, letter openers,

*Voc. Ed. 33, 49.5, 58, and 64 are courses in Physical Education; other courses may also be offered in this field.

trays, bowls, and metal-working tools. To study methods of teaching and methods of introducing art metal work in the public schools. *Principal Topics:* The obtaining of tools and materials, organizing the class, methods of teaching, making wooden mallets, forming blocks, actual making of objects, teaching art metal work to selected students.

Mr. Brock

Voc. Ed. 35—Psychology for Teachers—Semester 1 (2 and 2) 3 cr.

(See Psychology 35.)

Purpose: To acquaint students of education and others with some fundamental characteristics of human behavior. *Principal Topics:* Physiological bases of behavior, mental growth, the emotions and their expression, the learning process, individual differences and their measurement, personality, problem children, abnormal behavior. (*Psychology for Students of Education*—Gates; *Personality, Its Development and Hygiene*—Richmond.)

Mr. Brearley

Voc. Ed. 37—Rural and Village School Problems—Semester 1 (3 and 0) 3 cr.

Purpose: To introduce the student to the problems facing a teacher in rural and small town schools, and from this to determine the qualifications necessary for a successful teacher. *Principal Topics:* Correlation of the curriculum with the desirable social trends in agricultural and industrial communities, the summer session, transportation problems, special qualifications of teachers.

Mr. Monroe

Voc. Ed. 38—Teaching of Drawing—Semester 2 (2 and 2) 3 cr.

Prerequisite: Drawing 14 (or equivalent).

Purpose: To train for the teaching of drawing and the understanding of some of the elements of the subject. *Principal Topics:* Psychology as applied to the subject, planning the layout of suitable course to meet group needs, some of the arts and sciences used in drawing, fitness of teacher and student in class work, vocational direction in this field, methods, reading of drawings, grades, and grade methods. (Reference texts used as assigned.)

Mr. Klugh

VOC. ED. 39—PRINCIPLES OF SECONDARY EDUCATION—Semester 1 (3 and 0) 3 cr.

Purpose: To give prospective teachers the results of experience, research, and thinking in education which form the basis of sound practice in teaching high school subjects. *Principal Topics:* Characteristics and need of education, characteristics of learning, knowledge and thinking ability, motor, moral, and appreciative reactions, choice of subjects and activities, influence of age, maturity, and individual differences, methods of teaching, appraising results of education.

MR. TATE

VOC. ED. 40—PRACTICE TEACHING IN AGRICULTURE—Semester 2 (0 and 15) 5 cr.

Purpose: To give the students an opportunity to discharge the duties and responsibilities of an agricultural teacher in a local community. *Principal Topics:* Students participate in all-day, part-time, evening-class, and day-unit work. Habits, attitudes, ability to assume responsibility, promptness, general reliability, and degree of skill developed are some of the factors considered in rating the student as a prospective teacher. Students spend five afternoons a week in the practice schools. The opening date, daily schedule and general program of the high school may determine registration and participation in this course.

MR. CRANDALL MR. MONROE MR. STRIBLING MR. JOHNSON MR. BOWEN

VOC. ED. 41—PRINCIPLES OF VOCATIONAL EDUCATION—Semester 1 (1 and 9) 4 cr.

Purpose: To instruct students in principles and methods in connection with practice teaching. *Principal Topics:* Emphasis is placed on the participation of students in all possible phases of the work of a teacher of agriculture in a local community. Students organize and teach all-day, part-time, evening, and day-unit classes. Students are held responsible for definite phases of community and promotional work.

MR. CRANDALL MR. WHITE MR. MONROE MR. STRIBLING MR. BOWEN

VOC. ED. 42—METHODS IN AGRICULTURAL EDUCATION—Semester 2 (3 and 0) 3 cr.

Purpose: Problems and difficulties that arise in practice teaching receive special emphasis in this course. *Principal Topics:* A thorough survey is made of teaching content for all-day, part-time and evening-class students. Students make careful analyses of conditions and practices of farming in a local community as a source of teaching content. Other

sources of teaching content which receive emphasis in this course are data from experiment stations and the United States Department of Agriculture.

MR. CRANDALL

VOC. ED. 43 and 44—PRACTICE TEACHING IN INDUSTRIAL SUBJECTS—Semesters 1 and 2 (0 and 10) 5 cr.

Purpose: To develop through supervised practice-teaching those techniques, attitudes, and principles universally valuable in teaching, to give prospective teachers experience in handling problems in the school. *Principal Topics:* Organizing class, selection of teaching materials, planning work, discipline, teaching methods, examinations and grading, cooperation with school personnel, records and reports, inventories, and upkeep of equipment. Each student teacher periodically is given an opportunity to teach some industrial subject. During his teaching period he is responsible for his class just as if he were an employed teacher of that subject, including conforming to the high school schedule and registration period.

MR. TATE MR. BROCK

VOC. ED. 45—TEACHING SCIENCE—Semester 2 (3 and 0) 3 cr.

Purpose: To familiarize students with the objectives and methods of science instruction in public schools. *Principal Topics:* Project method of teaching science, aims and values of science instruction, teaching content, classroom procedure, and relationship of science instruction to the general and vocational courses and to administrative procedures.

VOC. ED. 46—TECHNIQUE OF TEACHING—Semester 2 (3 and 0) 3 cr.

Purpose: To acquaint the prospective teacher with the most significant problems in industrial teaching, to propose solutions for those problems consistent with most authoritative information available. *Principal Topics:* Shop planning, organizing classes, selection of equipment and tools, ways of securing materials and supplies for school shop, introducing a shop program, financing a shop program, advertising a shop program, methods of teaching, and discipline.

MR. TATE

VOC. ED. 47—HISTORY AND PHILOSOPHY OF EDUCATION—Semester 2 (2 and 0) 2 cr.

Purpose: To acquaint the student with the historical development of education and to develop an appreciation for the contributions of the various leaders in education. *Principal Topics:* Education in the Orient, early European education, the contributions of Plato, Luther, Locke,

Rousseau, Spencer, Herbart, Dewey, and others. The development of public education in South Carolina, special attention given to the social significance of the school.

Mr. Washington

Voc. Ed. 48—Teaching of Physics and Mathematics—Semester 2 (3 and 0) 3 cr.

Purpose: To train the prospective teacher in course-building and the methods of teaching as applied especially to mathematics and physics. *Principal Topics:* The purpose of physics and mathematics in the high school course, project planning, lesson planning, analysis of adopted textbooks, supplementary teaching materials and equipment, conduct of the recitation, grading, class management, and discipline.

Voc. Ed. 49.5—Leadership in Community Recreation—Semester 1 or 2 (2 and 3) 3 cr.

Purpose: To train leaders in the recreation field. *Principal Topics:* The aims, objectives and philosophy of the recreation movement. Historical background. Planning programs to meet community needs in the rapidly expanding leisure. A survey of organizations dealing with recreational problems. Students are given the opportunity to get practical experience in leadership by conducting social recreation activities and game programs in adjacent communities.

Mr. Kirchner

Voc. Ed. 50—Problems in Advanced Woodwork for Teachers—Semesters 1 and 2 (1 and 2) 1 2/3 cr.

Mr. Marshall

Voc. Ed. 51—Practice Teaching in High School Subjects—Semesters 1 and 2 (0 and 6) 3 cr.

Purpose: To give supervised practice in teaching general science, chemistry, mathematics, civics, etc., in order to develop skill in the best methods of teaching these subjects. (Enrollment is by individual approval and may be dependent upon observing the high school schedule including registration, etc.) *Principal Topics:* Selection of subject matter, planning work, methods of teaching, examinations, grading, discipline, cooperation with school personnel, records, and reports. When possible the student teacher is allowed to teach his subject of greatest interest. During his teaching period he is under close supervision and is held fully responsible for his class.

Mr. Tate

Voc. Ed. 53—Practice Teaching in Evening Classes—Semesters 1 and 2 (0 and 2) 1 cr.

Purpose: To give the prospective industrial teacher practice in organizing trade and industrial evening-classes, organization of suitable instructional material and the actual teaching of such classes. *Principal Topics:* Organization of classes, selection of teaching material, planning work, cooperation with industry, reports and records, and follow-up.

Mr. Tate Mr. Brock

Voc. Ed. 55—Coordination Methods in Vocational Education—Semester 1 (1 and 3) 2 cr.

Purpose: To give prospective coordinators of Diversified Occupations programs and other types of part-time education the method of coordinating such programs. *Principal Topics:* Cooperative Vocational Education, duties and responsibilities of coordinators, supervision, schedule making, teaching related subject matter, records and reports. The Smith-Hughes and George-Dean Vocation Acts, as they concern Cooperative Vocational Education.

Mr. Booker

Voc. Ed. 56—Educational and Vocational Guidance—Semester 2 (3 and 0) 3 cr.

Purpose: Study of meaning, purpose, and aim of guidance, methods of investigation in guidance, methods of guiding students, results of guidance. Each student will prepare a program of guidance suitable for a typical school system. *Principal Topics:* Need, meaning, basic assumptions, aims, and objectives of guidance; general methods of investigation; use of school records, exploratory activities, tests, estimates of personality traits, and self-analysis as methods of studying the individual; methods of securing and assembling facts about courses of study in educational instruction; methods of study of occupations; guidance of students in choice of occupation; choice of training, and organization of guidance.

Mr. Tate

Voc. Ed. 58—High School Coaching—Semester 2 (2 and 0) 2 cr.

Purpose: To train prospective high school coaches in the fundamentals of developing individuals and teams. *Principal Topics:* Emphasis is given to educational value of clean sports and particular attention is given to the physical condition of the student body, conditioning and training for competitive participation in football, basketball, and baseball. Field laboratory work may be required in addition to the class work.

Mr. Neely

VOC. ED. 59—ADMINISTRATION OF VOCATIONAL AND OTHER SCHOOLS—Semester 1 (2 and 0) 2 cr.

Purpose: To acquaint the prospective teacher with modern administration technique in public education. *Principal Topics:* The public school curriculum, the administration of vocational departments, the duties of the principal and his relationship to the school board, etc. Attention will also be given to certain legal phases of school administration.

MR. WASHINGTON

VOC. ED. 61 AND 62—INDUSTRIAL LABORATORY—Semesters 1 and 2 (0 and 6) 2 cr.

Purpose: To develop an industrial background for the teacher who is to have charge of a comprehensive industrial program in a community where an effort is being made to train young men and adult industrial workers in the individual skills of productive employment in industrial occupations. This will include woodworking, painting, metalworking, drafting, etc., and also the interplay of skills between these as adapted to teaching situations. *Principal Topics:* Planning, investigating, and determining the requirements in the way of materials, time and equipment, and executing the plans of such industrial projects as (1) forms, objects and structures in concrete, (2) economic utilization of various woods and lumber, (3) construction of objects of economic usefulness in metal, (4) skills in pipefitting and plumbing, (5) determining the economy of various electrical appliances, (6) economical repair of electrical appliances, etc. The student will be required to select his projects, furnish materials, make preliminary plans and sketches for them, and have these approved by the instructor. At the completion of each project in the laboratory the student will be carefully examined concerning the work he has done.

MR. TATE MR. BROCK

VOC. ED. 64—SPORTS ORGANIZATION AND PROMOTION—Semester 2 (2 and 3) 3 cr.

Purpose: To aid the student in organizing and promoting wholesome sports appropriate for schools and colleges. *Principal Topics:* The content of a comprehensive sports program; sports as educational activities; the value of sports from the avocational angle in the present social order; the intramural program, the interscholastic program, and the playground program. Special attention is given to developing organizations that promote appropriate recreation for all, rather than the few.

MR. KIRCHNER

Voc. Ed. 100—Special Problems in Education—Semesters 1 and 2 1-5 cr. (enrollment by individual permission.)

Purpose: To provide an opportunity for persons needing special assistance in meeting emergency or unusual situations in educational work.

Students who enter this course are required to provide their own transportation in connection with field work.

WEAVING AND DESIGNING

Mr. McKenna
Mr. Tarrant
Mr. Walters
Mr. Cartee
Mr. Barton
Mr. Newsom

W. D. 12—Textiles—Semesters 1 and 2 (1 and 2) 1 2/3 cr.

Purpose: To give the student a general background for the work which follows, and enable him to see the industry as a whole. *Principal Topics:* Elementary studies of weaving, designing, warping, and slashing. (*Beam Warpers, Slashers, Northrup looms*—International Textbook Company; *W. D. Mimeograph Notes.*)

Mr. Newsom

W. D. 21—Elementary Design—Semester 1 (2 and 0) 2 cr.

Suggested Preliminary Course: W. D. 12.

Purpose: To give thorough instruction in the construction of the fundamental weaves and their derivatives. *Principal Topics:* Plain, twill, and sateen weaves, derivatives, harness and chain drafts, principles of color harmony. (*Design Textbooks*—International Textbook Company; *W. D. Mimeograph Notes.*)

Mr. Tarrant

W. D. 22—Advanced Design—Semester 2 (2 and 0) 2 cr.

Prerequisite: W. D. 21.

Purpose: To instruct the student in constructing weaves for the more intricately woven fabrics. *Principal Topics:* Extra warp and filling for weight and figure, double cloths, velvets, plushes, corduroys, and turkish toweling. (*Design Textbooks*—International Textbook Company; *W. D. Mimeograph Notes.*)

Mr. McKenna Mr. Tarrant

W. D. 23—Weaving—Semester 1 (0 and 2) 2/3 cr.

Prerequisite: W. D. 12.

Purpose: To give the student thorough training in the operation, construction, and adjustment of loom mechanisms. *Principal Topics:* Analytical study of the loom, the shedding motion, design of shedding cams, the picking motion, the beating-up and the take-up motions; take-up calculations, let-off mechanisms, the filling stop motion, batteries, automatic loom adjustment, and practical loom fixing. (*W. D. Mimeograph Notes.*)

Mr. Barton Mr. Walters

W. D. 24—Weaving—Semester 2 (0 and 3) 1 cr.

Prerequisite: W. D. 23.

Purpose: To give the student instruction in fabric production on the more advanced types of looms with special cams and attachments. *Principal Topics:* Mechanical and electrical warp stop motions, filling feelers, thread cutters, shuttle change mechanisms, selvage and side cam motions, loom fixing. (*W. D. Mimeograph Notes.*)

Mr. Barton Mr. Tarrant

*W. D. 25—Weave Room Problems—Semester 1 (2 and 0) 2 cr.

Prerequisite: W. D. 12.

Purpose: To apply the fundamental principles of mathematics to weave room problems. *Principal Topics:* Mechanical calculations of the loom, the theoretical and practical production of the loom, yarn, beam, and fabric calculations, loom equipment and slasher problems. (*Weave Room Calculations*—Clark; *W. D. Mimeograph Notes.*)

Mr. Cartee

W. D. 26—Weave Room Problems—Semester 2 (2 and 0) 2 cr.

Prerequisite: W. D. 12.

Purpose: To apply the fundamental principles of mathematics to weave room problems. *Principal Topics:* Mechanical calculations of the loom, the theoretical and practical production of the loom, yarn, beam, and fabric calculations, loom equipment and slasher problems. (*Weave*

*W. D. 25 and Y. M. 24 or Y. M. 23 and W. D. 26 constitute required textile mathematics in Textile Engineering and Weaving and Designing courses.

Room Calculations—Clark; *Cotton Mill Calculations*—Smith and Quigley; *W. D. Mimeograph Notes.*)

Mr. Tarrant Mr. Cartee

W. D. 31—Dobby Design—Semester 1 (2 and 0) 2 cr.

Prerequisite: W. D. 21.

Purpose: To give instruction in the derivation of the specifications and drafts necessary for the productions of fabrics on the dobby loom. *Principal Topics:* Ratio of intersections; methods of combining weaves; laying out weaves for figures, stripes, and checks, dressing and beaming plans; harness, reed, and chain plans. (*W. D. Mimeograph Notes.*)

W. D. 32—Advanced Dobby Design—Semester 2 (2 and 0) 2 cr.

Prerequisite: W. D. 31.

Purpose: To give the student training in designing the more advanced types of dobby-woven fabrics. *Principal Topics:* Weaving specifications for handerkerchiefs, clip-spot fabrics, double cloths, and composition of original dobby patterns. (*W. D. Mimeograph Notes.*)

Mr. McKenna Mr. Tarrant

W. D. 33, 34—Fabric Analysis—Semester 1 (0 and 2) 1 cr. Semester 2 (0 and 2) 1 cr.

Prerequisite: W. D. 12, (W. D. 21 and 22 suggested.)

Purpose: To give the student a thorough knowledge of the analysis of fabrics as they come to the mill for reproduction. *Principal Topics:* Methods of determining yards per pound from a small sample of yarn counts; overall and ground construction; selection of yarn counts; determining the design, drawing-in-draft, chain draft, and reed plan; warp dressing plan; cotton, wool, silk, and rayon fabric. (*W. D. Mimeograph Notes.*)

Mr. Cartee

W. D. 35—Fancy Loom Fixing—Semester 1 (0 and 2) 2/3 cr.

Purpose: To give the student an understanding of the principles of operation, timing, and settings of the dobby and drop box looms. *Principal Topics:* A study of harness settings for various types of patterns; setting and timing of cylinder, knives, crankshaft, box motion, hooks, and chains; building box, pattern, and multiplier chains; weaving fabrics from original chains. (*Dobbies, Box Motions, Dobby and Dobby Multipliers; W. D. Mimeograph Notes.*)

Mr. Cartee

W. D. 36—Fancy Loom Fixing—Semester 2 (0 and 2) 2/3 cr.

Prerequisite: W. D. 23 and 24 (W. D. 35, suggested).

Purpose: To give practical instruction in the timing and setting of special motions used on dobby and box looms. *Principal Topics:* Double cylinder dobbies, rocking cylinder, two weave and center filling stop motion; automatic stationary magazines; four chain multipliers, warp striper, and feeler motion. (*Crompton and Knowles Bulletins; W. D. Mimeograph Notes.*)

Mr. Cartee

W. D. 37—Rayon Processing—Semester 1 (1 and 2) 1 2/3 cr.

Prerequisite: Open to juniors and seniors in the Textile School.

Purpose: To instruct the student in the processes of rayon warp preparation and in the weaving of rayon fabrics. *Principal Topics:* Rayon yarns classified according to the processes used in their manufacture; physical properties of the rayons and their relation to processing; winding, warp, and slashing; sizing materials and formulae; rayon weaving. (*Rayon and Synthetic Yarn Handbook*—Schwarz.)

Mr. McKenna

W. D. 41—Jacquard Weaving—Semester 1 (1 and 2) 1 2/3 cr.

Purpose: To give instruction in the operation and mechanism of the Jacquard machine and complementary equipment. *Principal Topics:* Types of Jacquard machines, types and methods of harness building, designs for different tie-ups, card cutting and lacing, Jacquard machine fixing. (*Jacquards, International Textile Book Company; W. D. Mimeograph Notes.*)

Mr. McKenna

W. D. 42—Jacquard Design—Semester 2 (1 and 4) 2 1/3 cr.

Purpose: To give instruction in the design of fabrics of artistic value for decorative purposes. *Principal Topics:* Application of the principles of decorative design; derivation of original designs by the use of color, weave, and form; pattern enlargement; card cutting and lacing; sample weaving. (*W. D. Mimeograph Notes.*)

Mr. McKenna

W. D. 43—Cost Finding—Semester 1 (3 and 0) 3 cr.

Prerequisite: Open to juniors and seniors in the Textile School.

Purpose: To teach the fundamentals of cost finding procedure and the control of manufacturing costs. *Principal Topics:* Standard costs,

cost control, valuing the inventory, material costs, labor budgets, distribution of fixed charges, departmental processing costs, determining the costs of individual yarns and fabrics, cost reports. (*Computing Cotton Fabric Costs*—Hill; *W. D. Mimeograph Notes.*)

Mr. Campbell

W. D. 44—Leno Design and Warp Preparation—Semester 2 (2 and 0) 2 cr.

Prerequisite: W. D. 31, 33, and 34.

Purpose: To give the student thorough instruction in the practice of warp preparation and in the structure of cross-woven fabrics and the methods employed in their design and production. *Principal Topics:* Mechanism for leno weaving, simple leno fabrics, fancy leno on one set of doups, the slotted doup, three-end leno; full turn leno, advanced fabric styling, starches; sizes, slashing methods, warping machinery. (*Fundamentals of Leno Weaving*—Shinn and McKenna; *W. D. Mimeograph Notes.*)

Mr. McKenna

W. D. 45, 46—Pattern Weaving—Semesters 1 and 2 (0 and 2) 2/3 cr.

Purpose: To coordinate the principles taught in the fundamental courses of the Weaving and Designing Department. *Principal Topics:* The student will be required to design and produce to specifications one fancy cloth each semester and submit reports covering the design and analysis. (*W. D. Mimeograph Notes.*)

Mr. McKenna

W. D. 45.5, 46.5—Advanced Pattern Weaving—Semesters 1 and 2 (0 and 6) 2 cr.

Prerequisite: W. D. 31, 32, 33, and 34.

Purpose: This course is arranged especially for students in textile design with the objective of giving the student more time to apply the principles of design in the production of fancy fabrics. *Principal Topics:* The student will be required to produce two decorative fabrics of a complex nature each semester and submit reports covering their specifications, design, analysis, and manufacturing cost.

Mr. McKenna

W. D. 47—Industrial Management—Semester 1 (2 and 0) 2 cr.

Purpose: To give the student an insight into the principles of factory organization and administration. *Principal Topics:* The design and con-

struction of factory buildings, selecting equipment, plant layout, material handling, lighting, time and motion study, wage payment plans, manufacturing costs. (*Industrial Engineering and Management*—Barnes.)

Mr. McKenna

W. D. 47.5—Personnel Management—Semester 2 (2 and 0) 2 cr.

Purpose: To acquaint the student with the personnel problems of the textile mills and the methods employed in the management of labor. *Principal Topics:* Employee development, industrial historical background, selection and placement, compensation, job analysis and specifications, joint relations, personnel records, industrial sanitation and health, safety, industrial codes. (*Applied Personnel Administration*—Walters.)

Mr. McKenna

W. D. 48—Knitting—Semester 2 (0 and 2) 2/3 cr.

Open to juniors and seniors in the Textile School.

Purpose: To familiarize the student with the principles of knitted fabric construction and hosiery production. *Principal Topics:* Knitting mechanisms, construction of knitted fabrics and hosiery, rib knitting, hosiery machinery, fancy knitting, sinker-reverse plating, the float and the welt stitch principle, hosiery analysis, material costs, labor costs, overhead costs, knitting calculations. (*W. D. Mimeograph Notes.*)

Mr. Cartee

W. D. 50—Thesis—Semester 2 (0 and 2) 1 cr.

Purpose: To introduce the student to the experimental method of solving problems. *Principal Topics:* Individual problems requiring original investigation will be assigned in some phase of textile manufacture. The thesis will consist of a report on the results obtained through research or experiment.

Mr. Cartee Mr. McKenna

Rooms and Equipment of the Weaving and Designing Department

The class rooms and laboratories of the Weaving and Designing Department are equipped for instruction in the manufacture of a wide variety of woven and knitted products. The weaving laboratories contain forty looms, representing practically all types of plain, gingham, dobby, and Jacquard looms in use in the southern cotton mills with additional equipment for winding, warping, slashing, and card stamping.

The knitting division is equipped with the leading types of latch needle hosiery machinery for the production of ladies' and men's plain and fancy hosiery. Modern lighting and humidifying systems have been installed in all laboratories and class rooms.

YARN MANUFACTURING

MR. EATON
MR. DUNLAP MR. BLAIR MR. GAGE MR. CAMPBELL

Y. M. 11—THE TEXTILE INDUSTRY—Semester 1 or 2 (1 and 2) 1 2/3 cr.

Purpose: To introduce textile students to the industry through study and discussions on factory organization, the use of cleaning and spinning machines, nomenclature. *Principal Topics:* Brief history of the industry, relation of owners and management, economic importance of textiles. The laboratory is used to demonstrate each machine used in yarn manufacturing. Calculations of machine speeds, drafts, and waste explain the action of each machine and its parts and yarn numbering. (*Y. M. Mimeograph Notes.*)

MR. EATON MR. BARTON MR. DUNLAP MR. GAGE

Y. M. 21—PICKERS—Semester 1 or 2 (2 and 2) 2 2/3 cr.

Purpose: To give the student thorough knowledge of cotton opening, cleaning, and lap forming equipment. *Principal Topics:* Bale breakers, automatic feeders, lappers, cleaning trunks, beaters, evener motions, and measuring devices, calculations for drafts, production, waste, and speeds. (*Cotton Yarn Manufacture*—Winchester; *Y. M. Mimeograph Notes.*)

MR. BLAIR

Y. M. 22—CARDS AND DRAWING FRAMES—Semester 1 or 2 (2 and 2) 2 2/3 cr.

Purpose: To give the student thorough knowledge of revolving top flat cards and drawing frames as used in cotton manufacturing. *Principal Topics:* Settings, grinding, stripping, card clothing, calculations for card speeds, production, waste, and draft, metallic and covered top rolls, roll settings, all calculations and practice in operating both machines. (*Cotton Yarn Manufacture*—Winchester; *Y. M. Mimeograph Notes.*)

MR. GAGE MR. EATON MR. BLAIR

Y. M. 23—MILL PROBLEMS—Semester 1 (2 and 0) 2 cr.

Purpose: To give a thorough foundation in arithmetic as applied to textile manufacturing. *Principal Topics:* Problems in draft, twist, waste

percentage, production, and machine organizations. (*Cotton Mill Mathematics*—Quigley and Smith; *Y. M. Mimeograph Notes.*)

MR. CAMPBELL MR. DUNLAP

*Y. M. 24—MILL PROBLEMS—Semester 2 (2 and 0) 2 cr.

Purpose: To give a thorough foundation in arithmetic as applied to textile manufacturing. *Principal Topics:* Deals with problems in draft, twist, waste percentage, production, and machine organizations. (*Cotton Mill Mathematics*—Quigley and Smith; *Y. M. Mimeograph Notes.*)

MR. DUNLAP MR. CAMPBELL

Y. M. 28—COTTON GRADING—Semester 1 or 2 (0 and 2) 2/3 cr.

Purpose: To teach the fundamentals of cotton classing according to U. S. Government Standards for grades and staples. *Principal Topics:* Stapling, classing, and valuing all grades of cotton raised in U. S.; methods of ginning, marketing, and handling cotton; contracts and claims. (*Government Bulletins; Cotton Yarn Problems*—Smith; *Y. M. Mimeograph Notes.*)

MR. GAGE MR. BLAIR

Y. M. 31—ROVING FRAMES—Semester 1 or 2 (2 and 2) 2 2/3 cr.

Purpose: To give complete information on the construction and operation of fly frames. *Principal Topics:* Drafting, twisting and winding on slubbers, intermediates, and Jack frames; production, rolls, spindles, and flyers, differential motions and cones, twist per inch, sizing roving, all calculations for these topics. (*Cotton Yarn Manufacture*—Winchester; *Y. M. Mimeograph Notes; Cotton Yarn Problems*—Smith.)

MR. EATON

Y. M. 34—SPINNING, SPOOLING, AND TWISTING—Semester 1 or 2 (2 and 3) 3 cr.

Suggested Preliminary Course: Y. M. 31.

Purpose: To give thorough knowledge of cotton yarns and their manufacture on ring spinning frames, winding, spooling, and twisting machinery. *Principal Topics:* Machine construction, functions of all parts, calculations for draft, twist, doubling, and constants; wet and dry

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*Y. M. 23 and W. D. 26, or W. D. 25 and Y. M. 24 constitute required textile mathematics in Textile Engineering and Weaving and Designing courses.

twisting, rings, and travelers. (*Cotton Yarn Manufacture*—Winchester; *Cotton Yarn Problems*—Smith; *Y. M. Mimeograph Notes.*)

Mr. Dunlap

Y. M. 42—Combers, Sliver and Ribbon Lappers—Semester 2 (1 and 2) 1 2/3 cr.

Purpose: To study settings and adjustment of the comber and its preparatory machines, and the value and use of its product. *Principal Topics:* Timing and setting comber for various staples and required waste, production and all other calculations, management, and operation of these machines.

Mr. Blair

Y. M. 43—Doubling and Drafting—Semester 1 (1 and 2) 1 2/3 cr.

Y. M. 31 and Y. M. 34 should precede Y. M. 43.

Purpose: To study as a manufacturing unit all card room and spinning room equipment. *Principal Topics:* Calculations for draft, production, weights, and number of machines required for various counts; labor costs; production of yarn from raw cotton, using all necessary equipment.

Mr. Dunlap

Y. M. 44—Mill Economics—Semester 2 (2 and 0) 2 cr.

Prerequisite: At least one textile course, preferably W. D. 43.

Purpose: To give seniors the principles of economics as applied to general management. *Principal Topics:* Cloth and cotton prices and their relation, calculations for quotations and delivery dates, mill construction, fire and accident insurance, wage and labor conditions. Some of these topics are made the subjects of written reports. (*Y. M. Mimeograph Notes.*)

Mr. Eaton

Y. M. 48—Textile Testing—Semester 2 (1 and 2) 1 2/3 cr.

Purpose: To instruct the student in testing fiber, yarns, and fabrics. *Principal Topics:* The principal topics include such factors as variety, growing conditions, fiber uniformity, and others influencing the strength and uniformity of yarns. The importance of humidity and its effect upon the working qualities and strength of yarn will be demonstrated. (*A. S. T. M. Specifications* and *Y. M. Mimeograph Notes.*)

Mr. Willis

Y. M. 50—Thesis—Semester 1 (0 and 2) 1 cr.

Required of all Textile Engineering Seniors.

Purpose: To summarize all information gained from previous Y. M. courses. *Principal Topics:* Using Y. M. Calculations, conducting manufacturing tests, analyzing test data, and preparing written reports.

Mr. Willis

Carding and Spinning Equipment

The carding and spinning division has one breaker and finisher picker, three cards, four drawing frames, one comber, one sliver lapper and one ribbon lapper, seven fly frames, twelve spinning frames (three of which are long draft), two twisters, two winders, and one spooler.

Testing Laboratory: The textile testing laboratory is equipped with American Moistening humidifying and dehumidifying units, automatically controlled. The laboratory is equipped with modern machines for testing fibers, yarns, and fabrics.

*ZOOLOGY**

Mr. Sherman

Mr. Dunavan Mr. Ware

Zool. 12—General Zoology—Semester 2 (2 and 4) 3 1/3 cr.

Purpose: For general science and pre-medical students. To give the student a thorough training in the characteristics, life-histories, and habitats of the principal animal forms. *Principal Topics:* Physiology of living cells, animal environments, cell division, maturation, reproduction, genetics, observation and study of representatives of the principal animal phyla. (*Textbook of General Zoology*—Curtis & Guthrie; *Laboratory Directions in General Zoology*—Curtis & Guthrie.)

Mr. Ware

Zool. 21—General Zoology—Semester 1 (2 and 2) 2 2/3 cr.

Purpose: For students in agriculture. To familiarize the student with the characteristics, life-histories, and habits of the common types of animals. *Principal Topics:* Physiology of cells, animal environments, cell division, reproduction; observations and study of representative

*See also Entomology. Students who major in the Entomology and Zoology Department are required to take several courses in Entomology in addition to those listed under Zoology.

animals; special emphasis on agricultural phases of the subject. (*Textbook of General Zoology*—Curtis & Guthrie; *Laboratory Directions in General Zoology*—Curtis & Guthrie.)

Mr. Dunavan Mr. Ware

Zool. 33—Advanced Zoology—Semester 1 (2 and 2) 2 2/3 cr.

Prerequisite: Zool. 12 or 21.

Purpose: To give advanced training in zoological principles and characteristics of animal forms as a basis for later graduate study. *Principal Topics:* Histology, embryology, ecology, distribution, and economic relationships of vertebrate animals, characteristics of all vertebrate groups.

Mr. Ware

Zool. 48—Introduction to Game Management—Semester 2 (2 and 0) 2 cr.

Prerequisite: Zool. 12 or 21.

Purpose: To present the subject of Game Management with special reference to game mammals and game birds. *Principal Topics:* Game mammals, birds and fishes of South Carolina and of the United States with reference to conservation and recreation. (No textbook required. Reference works to be used: *Game Management*—Leopold; *The Bob White Quail*—Stoddard; publications of U. S. Bureau of Biological Survey and Bureau of Fisheries.)

Mr. Sherman

PART VI--PUBLIC SERVICE

*THE SOUTH CAROLINA AGRICULTURAL EXPERIMENT STATION**

The Agricultural Experiment Station of South Carolina is a department of Clemson College. The experiment station at present consists of the main station, which is located at Clemson, and five sub-stations: one at Summerville, in the coastal plain region; one at Florence, in the Pee Dee section; one at Pontiac, near Columbia, in the sand hill region; one in the trucking section near Charleston; and one in Barnwell county in the melon-growing area. The main offices and laboratories of the station are located on the Clemson College campus, while the station experiment farm, consisting of about 200 acres, is east of and adjoining the college campus. The investigations dealing with the fundamental principles of agricultural sciences and with the application of such principles to practical agricultural operations are carried on in the laboratories and on the experiment station farm at Clemson. The experiments looking to the adaptation of such scientific data accumulated here and elsewhere to the conditions peculiar to certain sections of the State are carried on at the sub-stations and at branch laboratories established in certain sections of the State for this purpose.

It is the aim of the experiment station to conduct research work on problems which have a direct practical bearing on the agriculture of the State. With this end in view extensive experiments relative to the best methods of procedure under various conditions with the principal plants and animals have been undertaken. Economic and social problems are likewise being investigated. As progress is made the results obtained are given out to farmers in the form of bulletins, circulars, and personal letters. Since the establishment of the station, 303 such bulletins and fifty-three circulars have been published, covering practically all phases of agriculture.

Aside from the research work and the publication of results obtained from such research, the experiment station performs

*The experiment station staff is given on page 20.

various other duties. Among these might be mentioned the entomological and pathological inspection work (which aims to protect the farms, orchards, and gardens of the State against the introduction of injurious insects and diseases); the biological and soil survey of the State, and the cooperative experimental work carried on with hundreds of farmers in the State. The technically trained experts of the station staff are regarded as authorities in their several specialties, and they are constantly giving out information relating to the various lines of agricultural endeavor. The station staff also aids in disseminating agricultural knowledge by cooperating with the Extension Service of the College in holding agricultural meetings and conferences and by meeting with the farm demonstration agents and giving to them technical information which they in turn carry direct to the farmers.

Close cooperation is maintained with the various research bureaus of the United States Department of Agriculture and with the departments of the College. The laboratories are always open to the inspection of the students and other people of the State. The same is true of the experiment station farm. There is always opportunity for a limited number of students to secure work in the various divisions of the station and to assist in the research work carried on by the members of the station staff.

Home economics research is carried on in cooperation with Winthrop College at Rock Hill. This work is designed to secure additional information on economic, social, and health factors influencing the home and living conditions of rural people.

Close cooperation is maintained between the home economics research department, the teaching and extension workers in this field, and the clubs and societies engaged in the promotion of better rural homes.

A full report of the work and expenditures of the Experiment Station is published annually and this report and all other publications of the station are free and will be sent on request. (Requests for these should be addressed to the Director, Agricultural Experiment Station, Clemson, S. C.)

FERTILIZER INSPECTION AND ANALYSIS

The work of fertilizer inspection and analysis is under the supervision of the Fertilizer Board of Control consisting of a Committee of the Board of Trustees. The work of inspection and analysis is a department of the Agricultural Experiment Station. District Inspectors are located in different parts of the State. Their duties are to collect official fertilizer samples for analysis and check on the tagging and labelling of all fertilizer material.

The chemical work consists of the analysis of commercial fertilizers as provided for by the Fertilizer Law of the State. This Department also undertakes the analysis of waters, ores, minerals, and other naturally occurring materials, portions of human bodies in cases of suspected poisoning (as provided for by law), and the analysis of home-mixed fertilizers. All the work of this Department is done without charge.

*THE AGRICULTURAL EXTENSION SERVICE**

The agricultural extension work of the College is carried on by the Extension Service in cooperation with the United States Department of Agriculture. The work is supported by Federal appropriations and in part by State and County appropriations. The main development of extension work has come since the enactment of the Smith-Lever Act in 1914. The purpose of extension work is to diffuse among farm people useful and practical information on subjects related to agriculture and the farm home, and to stimulate the application of this information. A staff of specialists assists the county agents in planning and carrying out demonstrations with farmers over the State.

Publications and News.—Large numbers of publications, including bulletins, circulars, posters, and information cards, are distributed annually. The extension news service to the newspapers of the state consists of (1) mimeographed news letters to all papers issued twice weekly or oftener averaging thirty to forty stories per month; (2) news letters to the daily papers

*The extension staff is given on page 24.

through the Associated Press as occasion demands; (3) longer special or feature stories to individual papers or groups of papers when special material is at hand. Monthly letters or printed circulars on poultry, orchards, gardening, dairying, and boys' club work are mailed free to those persons especially interested in these subjects.

County Agents.—Every county in the State, by Act of the Legislature in 1929, has a county farm agent. These agents are agricultural college graduates who have had practical farm experience. They devote their time to instructing farmers through demonstrations, personal conferences, meetings, community organizations, publications, letters, and otherwise.

Home Economics Work.—This work is carried on under the immediate supervision of Winthrop College. It is, however, a part of the extension work under the Smith-Lever Act, and is under the general direction of the Extension Service. Every county is provided with a home demonstration agent by legislative enactment.

Negro Demonstration.—Seventeen local negro agents are employed to work with the negro farmers of the State in sections where the negro population is great. These agents are employed in cooperation with the State College at Orangeburg, where the supervising agent is stationed.

Live Stock.—Work in this project is carried on with the idea of promoting the live stock interest of the State along sound, permanent lines. Those desiring to purchase purebred live stock can in most cases secure them within the State from breeders who have been assisted by the Extension Service. This was not true some years ago. Live stock agents have also stimulated the development of pastures and the growing of forage crops and have assisted in the feeding and marketing of cattle and the cooperative purchase of materials needed. There is a revival of interest in hogs and sheep, and these lines of live stock work will no doubt make greater demand for assistance from the Extension Service.

Dairying.—The extension dairymen devote their time chiefly to development work connected with bull associations, feed campaigns, dairy schools. Information is furnished concerning the construction of silos and barns, the purchasing of dairy cattle, testing and improvement of herds, and the marketing of products.

Corn and Cotton Work—Cotton demonstrations among farmers are conducted for the purpose of improving the quality of staple and lowering the costs through larger yields per acre. A similar line of demonstration is in operation to put the growing of corn on a more efficient basis.

Orchards, Gardens and Sweet Potatoes.—Home orchards and gardens, commercial peach and apple orchards, and the efficient production of sweet potatoes for market are the special interests of the extension horticulturists. The results obtained in the last few years along these lines are far reaching and point the way for the utilization of some of our acres under present conditions.

Poultry Work.—The wisdom of increasing the size and quality of farm flocks is now being emphasized, together with efficiency in marketing poultry. For a number of years shipments of live poultry in car lots have been increasing. Many hatcheries are in operation, and every phase of poultry production is being enlarged. A modern poultry plant at Clemson was given to the College by a friend interested in promoting agricultural welfare and readjustment. This is one of the best poultry plants in the cotton states and serves as a place to work out poultry problems, as well as a demonstration to farmers and for teaching purposes.

Marketing.—Much of the time of extension workers is spent aiding in marketing. Efforts are made to secure convenient and profitable marketing arrangements for the various crops of the State. The organization of cooperative marketing associations is encouraged. Proper grading and loading for shipment are stressed, particularly where farmers are just beginning to produce a new crop. Shipping point inspection for those who desire it has been provided in cooperation with the Federal Bureau of Agricultural Economics for the protection of shippers of cer-

tain perishable crops. Very little crop surplus is produced for which some outlet has not been found. The chief problem lies in producing and preparing for market preferred quality products.

Entomology.—There are two principal lines of this work: first, insect control work; and second, beekeeping work. One specialist is employed who gives his time to the insect work, instructing farmers in the life history, habits, etc., of insects and control measures.

A specialist in beekeeping is employed to develop this industry for which the State has great possibilities.

Boys' Club Work and Short Course.—Boys' agricultural clubs are organized with the idea of enlisting the intelligent interest of the boys, and through them their parents, in improved methods of agriculture.

Agricultural Economics.—Much farm production takes place blindly without satisfactory knowledge on the part of the farmers and farm credit agencies of the prospect for success in any given enterprise, or for any particular acreage of a crop. There is a very great need for wider dissemination among farm people of economic information that may be used by them as a guide in planning their farm businesses. The importance of such information having been realized, a division of Agricultural Economics has been created in the Extension Service to aid in keeping the farm people of the State better informed on economic matters and to carry to them the results of research work.

Since the beginning of the acreage adjustment work of the Agricultural Adjustment Administration in 1933 under the United States Department of Agriculture, the work of the Extension Service has included the conducting of campaigns to carry out the policies of the AAA in seeking to improve the economic condition of the farmers.

Agricultural Engineering.—Two extension specialists are employed to help direct farm development along engineering lines, including terracing, drainage, two-horse and power equipment, as well as plans for farm buildings and other structures.

THE ENGINEERING EXPERIMENT STATION

A majority of the Land Grant Colleges of the United States have established engineering experiment stations, and these have proved of great value in aiding industrial and engineering developments in the various states.

The engineering experiment station of the Clemson Agricultural College was established by the Board of Trustees in July, 1924.

Its purpose is to aid the present industries in the state, to do research work on the material resources of the state with a view of leading to the establishment of new industries, to study methods of utilizing waste products, etc.

In addition to serving the industries of the state and helping to solve engineering problems for the agricultural interests, it is hoped, in cooperation with the stations of other states, to add to the store of scientific and engineering knowledge. The staff consists of well-trained men from the various schools and departments of the college. The laboratories of the several departments of engineering, as well as others, are available for the use of the station in its investigation.

The results of all investigations are to be published in the form of bulletins and circulars to be distributed free to all who may be interested. Copies of publications may be secured by applying to the Director of Engineering Experiment Station, Clemson, South Carolina.

RESEARCH IN EDUCATION

While members of the Education staff have conducted a number of research projects in the past, no definite research organization for educational research existed prior to 1936, at which time the research activities of the School of Vocational Education were organized. A grant from the General Education Board and the support of the college made possible the initiation of this program. Provisions were made for cooperative research in Vocational Agriculture with the State Supervisor of Agriculture in the expansion of that work under the George-

Dean Act. When the largest single expenditure of funds is involved, and when the largest number of any single enterprise is involved, it seems but natural that progressive educational programs should include a comprehensive effort in research. Clemson hopes through this work to help advance the cause of education along appropriate lines.

*LIVESTOCK SANITARY WORK**

The Clemson College Live Stock Sanitary Office is a department of Clemson College and is under the supervision of the Agricultural Committee of the Board of Trustees. This office is located in the State Office Building, Columbia, S. C., in order that the best interests of the livestock industry may be served, and is in charge of the State Veterinarian, Dr. W. K. Lewis, who is also Director of this Department.

The principal objectives of this office are tick eradication, tuberculosis eradication, and hog cholera control. In addition to these, all reported outbreaks of contagious, infectious, and communicable diseases of livestock and poultry are investigated and measures recommended for their control and eradication; and quarantine is maintained against the introduction of diseased livestock into the State.

The Columbia office has a fully equipped laboratory for bacteriological, pathological, and serological work, in order that proper and prompt diagnosis of certain diseases may be made. Parasitic research work will be conducted in various sections of the State in cooperation with the Columbia laboratory.

In addition to the force of veterinarians working with the Columbia office, Assistant State Veterinarians are located at strategical points in the State in order to be readily available to all farmers.

On July 1, 1938, twenty-nine practicing veterinarians of the State were commissioned as Deputy State Veterinarians, to assist the State Veterinarian in the control and eradication of con-

*Livestock Sanitary Work staff is given on page 23.

tagious and infectious diseases of livestock. The Deputy State Veterinarians are stationed principally in the northern and eastern sections of the State, so these together with the Assistant State Veterinarians in the middle and southern sections of the State, enable the Clemson College Live Stock Sanitary Office to render a service to the livestock industry of the State in keeping with its development and maintain the service at the highest degree of efficiency.

The Clemson College Live Stock Sanitary Office also maintains equipment for handling large stocks of anti-hog-cholera serum, virus, and veterinary biologics, and furnishes these products to the citizens of the State at cost, thereby effecting a saving to them of several thousands of dollars annually.

The live stock sanitary work is required by legislative enactment and is supported by legislative appropriations.

The Bureau of Animal Industry, U. S. Department of Agriculture, cooperates in tick eradication, tuberculosis eradication, and hog cholera control, and appropriates funds in addition to the State appropriation for these objectives.

MISCELLANEOUS PUBLIC SERVICE

Entomological and Pathological Inspection.—This work is carried on under the direction of the State Crop Pest Commission. The State Entomologist and the State Pathologist have charge of this work under the commission.

The work of these officers consists in the control of contagious plant diseases and insect pests. Supervision of all nursery stock sold within the State is a duty of the Crop Pest Commission.

A permit tag issued by the State Crop Pest Commission should be attached to every package of nursery stock, seed, or plants offered for sale or shipment for planting purposes.

Textile Testing.—The textile department maintains a yarn testing service for the cotton mills of South Carolina.

Textile Research.—Clemson in cooperation with the Bureau of Agricultural Economics of the United States Department of Agriculture conducts manufacturing tests of grades, staples, and varieties of cotton. Valuable reports based on this work are issued from time to time. Copies of these reports may be acquired by addressing either the College or the Bureau of Agricultural Economics, Washington, D. C.

Service to Textile and Other Industrial Teachers.—The College in cooperation with the State Department of Education is glad to assist those who teach night schools by supplying a trained man to assist in the work of organizing classes, organizing courses of study, making plans for teaching evening classes, and actually teaching vocational subjects. Requests for information regarding this service should be addressed to Professor L. R. Booker, Itinerant Teacher Trainer, Industrial Education Department, Clemson. S. C.

Agricultural Follow-up and Itinerant Teacher Training.—The members of the staff of Agricultural Education visit all beginning teachers for the purpose of assisting them on the job and also for the purpose of collecting information which may prove helpful in improving the work of teacher training at the College.

Research in Vocational Agricultural Education.—A research program has been inaugurated in the Department of Agricultural Education as one of the six functions of teacher training. This work is being done in cooperation with the State Department of Education. The state supervisors of agricultural instruction and the teacher trainers have adopted, as the purpose of research work at the present time, the promotion of better instruction in vocational agriculture in the public schools of the State.

State Vocational Agricultural Judging Contest.—The Clemson Agricultural College, cooperating with the State Department of Education, conducts annually a judging contest for students of vocational agriculture. The nature of this contest is educational, and many high school boys have an opportunity thereby of improving themselves in selecting better specimens of various

agricultural products. The two schools ranking highest in the contest in 1938 were: First, Johnston, J. R. Smoak, coach; and second, Lamar, P. M. Booth, coach. Frank Smith of Easley was awarded a prize as the highest individual contestant. The following teams won first places: judging dairy cattle, Johnston; judging all classes of poultry, Loris; judging crops, Conway; judging horticultural products, Cameron. The Johnston High School won first place in judging general livestock and were given a trip to Kansas City to represent the State in the Vocational Students' Judging Contest at the American Royal Livestock Show.

State-wide Industrial Education Contest.—A State-wide Industrial Education contest was inaugurated by Clemson College and the State Department of Education in 1935. This contest has been open to all public schools teaching Industrial Education. The contest includes competition in woodworking, drawing, textiles, and toolcraft. The rules are outlined by members of the faculty representing those departments involved in the competition. Many valuable prizes are given each year to individuals and teams who participate in the contest. The greatest value is the interest created in craftsmanship on part of contestants. Any school may receive announcements concerning contest by writing H. S. Tate, Department of Industrial Education, Clemson, S. C.

Publications.—The Agricultural Education staff in cooperation with the State Department of Education publishes a monthly bulletin which is used by students of vocational agriculture in the public schools of the State. The contents of this bulletin consist largely of the results of experimental work in agriculture assembled in such a way as to assist students in solving their farming problems. This bulletin has been published for fifteen years. The teachers of agriculture have made it a practice to have the numbers of each volume bound for current use. All back numbers have been completely indexed. The bound volumes of Agricultural Education Bulletin together with the current monthly issues provide the students of vocational agriculture with a record of the results of applicable experimental work in

agriculture. At the present time 10,000 copies are published monthly. This publication is available to students and teachers of agriculture and others at cost.

SUMMER EDUCATIONAL ACTIVITIES

During the summer, various activities are organized to serve the needs of special groups of students and others. The activities undertaken in the summer of 1938 included the following:

CCC Summer School for Advisers of Districts B and I ---------- June 6-25
Summer School ---------- June 6-July 16
Public School Trustees Meeting ---------- June 9
Conference of County Superintendents of Education ---------- June 15-17
Informal Conference of Administrators ---------- June 21-22
Four-H Boys ---------- July 6-8
Opportunity School ---------- July 23-August 20
Poultry Short Course ---------- August 23-25
Conference of Agricultural Teachers ---------- August 25-27

THE CLEMSON COLLEGE SUMMER SCHOOL

The Clemson College Summer School provides an opportunity for Clemson and other college students to take advanced courses and hasten graduation, to take special work not offered during the regular session, or to make up back work for time lost on account of illness. It also provides opportunity for high school graduates to "test" their interest and ability in college work at a very nominal cost.

Education courses anticipated for 1939 include primary, elementary, junior high, secondary, vocational and special courses. There has been an unusually strong demand for Clemson-trained teachers.

The following courses of study were offered during the 1938 Summer School. An announcement of the 1939 program may be secured in the spring by addressing either G. E. Metz, Registrar or W. H. Washington, Dean, Clemson College Summer School, Clemson, South Carolina.

SUMMER SCHOOL COURSES

June 6-July 16

1938

Dept. & No. of course	Title	Instructor	Credit
Agr. 11	Field Crops	Collings	3
Agr. 20	Soils	Collings	2⅔
Agr. 31	Fert. and Manures	Collings	2
Agr. 101	Tobacco (June 6-25)	McGee	2
Agr. Ec. 100	Coop. Effort (June 27-July 16)	Aull	2
Agr. Engr. 23s	Farm Shop	Nutt	2
Bact. 31	General Bacteriology	Aull	3⅓
Chem. 11	General Chemistry	Hunter	3⅔
Chem. 12	General Chemistry	Hunter	3⅔
Chem. 28s	Organic Chemistry	Mitchell	4
Chem. 33a	Quantitative Analysis	Mitchell	2⅔
E&G 11	Am. Gov't & Political Parties	Holmes	2
Ed. 20.1s	Primary Reading, Obs., Etc.	Sharpe	2
Ed. 21.1s	Observation & Par. Tch.	Sharpe	2
Ed. 21.2s	Centers of Interest, Prim. Gr.	Sharpe	2
Ed. 26.1	Teach. of Music and Toy Orchestra in the Grades	Holleman	2
Ed. 27.5	Bldg. of Programs for Assemblies and Special Occasions	Holleman	2
Ed. 28.7	The Teaching of Music in the Integrated Program	Holleman	2
	or		
Ed. 29.1s	Teach. Arith., Gr. 4-7	Holleman	2
Ed. 31s	Centers of Interest, Int. Grades	Willson	2
Ed. 32s	Observ. & Practice Teaching	Willson	2
Ed. 33	Organization of Courses of Study	Brock	3
Ed. 35s	Teach. of Art Metal Work	Brock	2
Ed. 36s	Teach. of Soc. Science in Junior High School	Hines	2
Ed. 37s	Gen. High School Methods or	Hines	2
Ed. 37.5s	Teach. of Hist. & Civics in H. S.	Hines	2
Ed. 38s	Methods in Classroom Health Ed. in Int. Grades	Hines	2
Ed. 39	Principles of Secondary Ed.	Tate	2
Ed. 40a,b,c	Rural Ed.	Lingenfelser & Spe. Tea.	6
Ed. 58	Educational Psychology	Tate	2
Ed. 65s	Com. Recreation	Kirchner	3
Ed. 66s	Sports & Games for Ph. Ed.	Kirchner	3
Ed. 113	Supervision of Ed. Program	Booker	2
Elect. 35	Electrical Machinery	Philpot	2⅔
Elect. 36	Elect. Welding	Philpot	3
Elect. 38s	High School Electricity	Philpot	2
English 15	Comp. & Am. Lit.	Bradley	3
English 16	Comp. & Am. Lit.	Kinard	3
English 21	Major Poets, Age of Romanticism	Kinard	2
English 22	Major Poets, Victorian Age	Kinard	2
English 24s	Children's Literature	Willson	2
English 31	Public Speaking	Bradley	2
English 32	Business Law	Bradley	2
History 1	Develop. of South Carolina	Holmes	2
History 14	Am. Econ. & Social Hist.	Holmes	2
Ind. Arts 55s	Advanced Woodwork	Marshall	2

Ind. Arts 56s—Projects in Woodwork ——— Marshall ——— 2
Ind. Arts 57s—Ind. Arts for Teachers ——— Marshall ——— 2
Ind. Arts 58s—Woodfinishing ——— Marshall ——— 2
Lib. Sci. 45s—Cataloging and Class. ——— Stevenson ——— 3
Lib. Sci. 46s—Adolescent Literature ——— Stevenson ——— 3
Math. 11s—Plane Trigonometry ——— Hunter ——— 3
Math. 12s—Col. Algebra & Anal. Geom. ——— Hunter ——— 3
Math. 23—Dif. Calculus ——— Hunter ——— 3
Math. 24—Int. Calculus ——— Hunter ——— 3
ME 30—Materials of Engineering ——— Philpot ——— 2
Physics 11—General Physics ——— Huff ——— 3⅔
Physics 12—General Physics ——— Huff ——— 3⅔
Physics 21—Sophomore Physics ——— Hendricks ——— 4
Physics 22—Electricity & Mag. ——— Hendricks ——— 4
Physics 23, 24—Lab. Phys. ——— Brown or Huff ——— ⅔
Physics 33—Astronomy ——— Huff ——— 2
Soc. Sci. 41s—Ind. Sociology ——— Booker ——— 2
Typewr. 30s—Beginners' Typewriting ——— Hudgens ——— 3
Typewr. 40s—Advanced Typewriting ——— Hudgens ——— 3
Voc. Ed. 34s—All Day Ag. Ed. (June 6-25) ——— White ——— 2
Voc. Ed. 99r—Skills in Diversified Occupations
Crawford, Lombard, Robertson, Newton ——— 2
Voc. Ed. 102—Methods Farm Shop (June 25-July 17) ——— Monroe ——— 2
Voc. Ed. 104—Part-time (June 6-25) ——— Johnson ——— 2
Voc. Ed. 105—F. F. A. Activities (June 6-25) ——— Bowen ——— 1
Voc. Ed. 106—Research in Ag. Ed. (June 6-25)
Repeated June 25-July 16 ——— Staff ——— Ar.
Voc. Ed. 107—Methods Soil Conservation ——— Crandall ——— 2
Voc. Ed. 121r—Cur. Prob. Ind. Ed. ——— Goldberger ——— 2**
Voc. Ed. 122r—Research Ind. Ed. ——— Turner ——— 2**
Voc. Ed. 123r—Adm. Voc. Depts. & Prog. ——— Turner ——— 2
Voc. Ed. 124r—Con. Meth. in Voc. Ed. ——— Booker ——— 2
Voc. Ed. 125r—Voc. & Ed. Guidance ——— Tate ——— 2
Voc. Ed. 126r—Coordination Voc. Ed. ——— Booker ——— 2
WD 12—Gen. Textiles ——— McKenna ——— Ar.
WD 21s-22s—Design ——— McKenna ——— Ar.
WD 23s, 35s—Loom Fixing ——— McKenna ——— Ar.
WD 31s-32s—Dobby Des., Fab. Anal. ——— McKenna ——— Ar.
Welding 36—Gas Welding ($5.00 Lab. Fee) ——— Philpot ——— 3
YM 29s—Cot. Grad. ($15.00) ——— Person ——— 2

**Shorthand and typewriting receive elective credit for Clemson Education students. Others should have Head of Major Department approve in advance if credit is desired.

PART VII---STUDENT REGISTER

WAR DEPARTMENT TRAINING STAFF

Colonel Charles W. Weeks---Infantry
Major Glenn D. Hufford---Infantry
Major James P. Gammon---Infantry
Major Russell F. Walthour---Infantry
Major Albert H. Dumas---Infantry
Major David E. Barnett---Infantry
Sergeant Harry J. Wilkinson---Detached Enlisted Men's List
Sergeant Henry S. Heath---Detached Enlisted Men's List
Sergeant Kenney R. Helton---Detached Enlisted Men's List
Sergeant Otis A. deMott---Detached Enlisted Men's List

CADET BRIGADE ORGANIZATION

Colonel J. S. Baskin---Brigade Commander
Colonel R. B. Fickling---Brigade Executive
Major J. C. Cook---Brigade Adjutant
Captain D. M. Hutchinson---Brigade Chaplain
First Lieutenant T. O. Lawton---Brigade Publicity Section
First Lieutenant T. B. Young---Brigade Publicity Section
Master Sergeant A. D. Graham---Brigade Sergeant Major
Staff Sergeant J. B. Lee---Brigade Publicity Section
Staff Sergeant E. Mazo---Brigade Publicity Section
Staff Sergeant J. E. Schmidt---Brigade Publicity Section

BATTALION ORGANIZATION

BRIGADE SPECIAL UNITS BATTALION

Lieutenant Colonel H. L. Beach---Battalion Commander
Captain W. M. Hudson---Battalion Executive
First Lieutenant R. W. Watson---Battalion Adjutant
First Lieutenant B. H. Keitt---Battalion Supply Officer
Staff Sergeant J. O. W. Richardson---Battalion Sergeant Major

Second Lieutenant Company "1"	Second Lieutenant Company "2"	Band
Captains		*Captain*
Thomson, B. F.	Calhoun, F. H. H.	Horner, L. C.
First Lieutenants		*First Lieutenants*
Nickles, J. B.(*)	Shealy, J. L.(*)	Martin, J. R.(*)
		Crosby, D. D.
		Frazier, W. H.
		McCorkle, P. H.
Second Lieutenants		*Second Lieutenants*
Ambrose, L. R.	Baldwin, M. C. L.	Banister, R. A.
Ballentine, C. F.	Barrineau, T. W.	Bryan, W. C.
Blake, I. C.	Bobo, F. G.	Guerry, F. P.
Blakely, J. R.	Bone, M. B.	Peeling, B. A.
Blakely, L. J.	Boselli, T. J.	Rhodes, L. M.
Brackett, W. E.	Boys, R. W.	Wolfe, R. S.
Burress, D. E.	Brodie, G. A.	
Carson, R. G.	Cain, W. T.	
Cason, W. S.	Chapman, A. D.	

(*) Indicates Company Executive Officer.

Second Lieutenants

Champion, T. M.
Coleman, W. J.
Cooper, H. M.
Copeland, J. F.
Copeland, O. L.
Crouch, H. M.
Dixon, J. E.
Evans, A. M.
Ford, P. G.
Fulmer, T. D.
Gibert, J. W.
Harrison, J. H.
Henderson, W. T.
Henry, R. L.
Ivey, E. M.
Johnstone, E. P.
Joyce, D. T.
Kirchner, A. H.
Kirton, J. J.
Lee, W. L.
Lester, N. R.
Lyles, J. T.
McMillan, J.
Mahon, P. M.
Miley, C. C.
Moon, C. C.
Murphy, J. B.
Nichols, M. M.
Parker, H. C.
Patterson, S. P.
Perez, E. F.
Powers, M. R.
Salley, H. G.
Senn, T. L.
Shealy, C. D.
Sloan, R. A.
Snell, A. H.
Stribling, S. P.
Summerbell, W. E.
Warner, C. T.
Waters, L. E.
Watson, P. S.
Whitmire, A. P.
Chapman, A. H.
Cofer, W. O.
Coker, G. R.
Coleman, A. J.
Coleman, R. W.
Coleman, W. D.
Cosgrove, H. H.
DeLoach, A. J.
Dewey, C. A.
Dukes, O. S.
Duvall, J. E.
Feinstein, H.
Foster, W. T.
Gibson, H. C.
Gilchrist, H. A.
Gormley, C. J.
Griffin, E. W.
Guerard, E. P.
Guy, R. A.
Harmon, M. N.
Hendricks, B. L.
Hendrix, C. E.
Hester, R.
Jackson, R. F.
Jones, C. M.
Jones, E. H.
Kee, J. M.
Kirk, J. M.
Lee, P. E.
Lipscomb, J. B.
Lynes, J. M.
McAlpine, L. E.
McCown, K. J.
McFaddin, N. J.
McNair, T. T.
Miller, L. L.
Morgan, D. C.
Moss, R. W.
Newman, B. F.
Northrup, W. B.
Page, N. R.
Rabinowitz, M.
Rawl, F. L.
Raysor, H. A.
Simkins, J. E.
Smith, J. G.
Smith, J. K.
Staley, G. C.
Stokes, W. H.
Sullivan, J. E.
Thomas, H. J.
Thomas, R. C.
Vickery, V. V.
Whitlock, F. M.
Whitney, J. T.
Williamson, L. A.

Band Leader

Bonnette, G. H.

First Sergeant

Mulling, F. J.

Supply Sergeant

Fenstemacher, E. R.

Sergeants

Berry, M. M.
Burney, J. H.
Cheatham, F. C.
Elmore, F. B.
Gramling, R. M.
Hawkins, T. P.
Law, W. C.
Lawton, J. G.
McClure, J. B.
McKnight, J. C.
Pearman, J. N.
Perna, F. J.
Rhodes, W. G.
Sharpe, W. B.
Turner, G. M.
Wood, W. D.

Corporals

Benfield, J. K.
Blaylock, C. S.
Brooks, A. L.
Cannon, J. E.
Coakley, F. H.
Coakley, G. E.
Dukes, R. C.
Henderson, J. R.

Second Lieutenants

Windham, J. M.
Wyant, Y. W.
Yelton, L. M.

First Sergeants

Rhyne, W. A. Cook, H. L.

Supply Sergeants

Bridges, M. L. Stoudemire, G. A.

Sergeants

Bettis, J. R.
Cason, L. L.
Denny, H. S.
Hiott, E. D.
Parrott, D. L.
Rex, G. L.
Strickland, O. K.
Wise, W. R.

REGIMENTAL ORGANIZATION

FIRST REGIMENT

Colonel H. U. Bookhart----------Regimental Commander
Lieutenant Colonel F. W. Durban----------Regimental Executive
Captain W. S. Coleman----------Regimental Adjutant
First Lieutenant F. A. Thompson----------Regimental Chaplain
Master Sergeant C. B. Lawton----------Regimental Sergeant Major
Staff Sergeant G. C. Commander----------Regimental Color Seargeant
Staff Sergeant W. M. McGinty----------Regimental Color Seargeant

BATTALION ORGANIZATION

FIRST BATTALION

Lieutenant Colonel J. F. Brailsford----------Battalion Commander
Captain C. M. Aull----------Battalion Executive
First Lieutenant R. F. Anderson----------Battalion Adjutant
First Lieutenant R. W. Rivenbark----------Supply Officer
Staff Sergeant P. H. Nelson----------Sergeant Major

Company "A"	Company "B"	Company "C"	Company "D"
	Captains		
Covington, H. M.	Troy, H. P.	Shepherd, E. W.	Woods, C.
	First Lieutenants		
Scott, B. E.	McCurry, E. T.(*)	McLeod, B. F.(*)	Covington, J. C.(*)
Young, E. L.	Botts, E. O.	Talbert, J. N.	Cox, W. T.
	Gray, Z.	Traywick, H. V.	Frazier, J. B.
	Stanfield, T. F.		Hughes, D. G.
			Mitchell, W. B. R.

(*) Indicates Company Executive Officer.

Second Lieutenants

Bailey, J. R.
Black, C. V.
Brice, F. J.
Chovan, P. B.
Goins, C. A.
Jackson, W. O.
Moorer, T. R.
Pearson, B. F.
Pennington, C. W.

First Sergeants

Darwin, D. P. Richardson, T. Horton, L. S. Stallworth, J. M.

Supply Sergeants

Gillespie, R. M. Crumbley, J. C. Almeida, J. L. Moorman, R. W.

Sergeants

Anderson, C. E.
Anderson, G. J.
Anderson, W. D.
Ballenger, P. C.
Farmer, J. G.
Fender, W. C.
Fogle, H. L.
Forester, R. C.
Garrison, J. S.
Huff, R. B.
Jones, H. C.
Kennedy, G. C.
Levin, J. H.
Morgan, P. E.
Orr, J. L.
Pugh, W. E.
Redfern, I. C.
Webb, G. R.

Able, T. A.
Acker, H. L.
Agnew, R. E.
Bradbury, D. W.
Creel, L. E.
Earle, Joe B.
Fleetwood, H. G.
Fuseler, H. W.
Hall, H. P.
Harper, J. J.
Jeffcoat, B. D.
Johnson, J. W.
Muller, J. C.
Pender, M. T.
Shirley, Joe A.
Wray, C. V.

Ackerman, M. W.
Ackerman, W. M.
Adams, P. H.
Caughman, R. H.
Cauthen, R. H.
Crews, M. S.
Forsythe, R. G.
Frazier, J. R.
Fulmer, R. B.
Greene, W. A.
Hubbard, R. C.
Huskey, J. B.
Kearse, W. H.
Kolb, K. W.
Macartney, O. K.
Oswald, H. C.
Paulling, B. M.
Shuler, G.
Waters, G. H.

Bryant, L.
Embody, C. F.
Guyton, G. G.
Hendricks, G. H.
Keel, S. T.
Lindsay, R. J.
Little, J. F.
Little, W. H.
McFadden, J. B.
McLaurin, K. F.
Manning, W. H.
Moore, G. S.
Okurowski, W. B.
Payne, J. E.
Sharpe, R. G.
Shealy, M. C.
Shealy, W. L.
Smith, T. L.
Thomas, R. L.
Trexler, B. D.

Corporals

Alexander, H. F.
Braithewaite, R.
Darby, W. M.
DuRant, H. S.
Herndon, F. M.
Lowe, W. H.
Miller, J. H.
Poole, C. B.
Ross, E. A.
Sullivan, J. W.

Awtrey, W. E.
Burley, B. B.
Byrd, W. C.
Cline, W. E.
Cooler, E. W.
Holley, E. B.
Klugh, T. S.
Lucas, T. E.
Matthews, W. B.
Platt, J. M.
Ross, D. J.

Benton, D. A.
Chuharski, J.
Coyle, B. M.
Crayton, T. W.
Dent, H. N.
LeMaster, H. L.
Lytton, J. L.
Propst, R. C.

Blessing, J. E.
Buchanan, H. L.
Cameron, A. N.
Clawson, C. H.
Deitz, J. F.
Horton, F. H.
Horton, J. I.
Hunter, J. V.
Maness, L. E.
Nickles, W. B.
Parrish, B. C.
Pearce, R. R.
Richardson, J. H.
Trobaugh, A. K.

BATTALION ORGANIZATION

SECOND BATTALION

Lieutenant Colonel J. H. Guess----------Battalion Commander
Captain J. O. Sweeny----------Battalion Executive
First Lieutenant E. H. Thomas----------Battalion Adjutant
First Lieutenant V. M. Shell----------Battalion Supply Officer
Staff Sergeant G. M. McMillan----------Battalion Sergeant Major

Company "E"	Company "F"	Company "G"
	Captains	
Knox, F. T.	Watson, J. D.	Carlson, P.
	First Lieutenants	
Davis, N. R.(*)	Avinger, H. C.(*)	Pregnall, A. H.(*)
Loyless, E. M.	Gaskins, J. L.	Boyd, S. J.
Mackintosh, J. D.	Wilks, J. L.	Citron, L. A.
	First Sergeants	
King, R. A.	Burdette, E. K.	Spires, C. E.
	Supply Sergeants	
Sanders, A. W.	Williams, A. V.	Planck, C. G.
	Sergeants	
Ariail, R. L.	Baker, J. M.	Bateman, F. F.
Bagnal, H. T.	Cochran, R. P.	Bell, W. M.
Bradford, S. R.	Fellers, R. C.	Bethea, W. H.
Dixon, J. S.	Foster, W. W.	Coggins, A. E.
Ferguson, T. D.	Gardner, L. E.	Copley, W. M.
Hearon, R. L.	Hanna, L. G.	Gilliam, L. G.
Hunt, B. D.	McDowell, E. B.	Gore, J. P.
Jones, J. B.	McGowan, S. B.	Gray, F. F.
Lawton, M. R.	McLaurin, C. H.	Hall, L. W.
McPhail, F. E.	Mackintosh, D. M.	Hunter, J. C.
Mobley, F. B.	Marett, H. D.	Johnson, H. A.
Newton, C. G.	Moorer, D. F.	Land, J. S.
Rushing, B. T.	O'Neal, J. B.	Lanford, L. E.
Simpson, A. T.	Robinson, J. E.	McClure, G. W.
Van Wyck, W. O.	Rogers, J. R.	McMakin, G. C.
West, E. C.		Manning, L. W.
Zeigler, C. M.		Massey, L. M.
		Pruitt, S. H.
		Roper, D. B.
		Smith, D. T.
		Summers, C. B.
		Webb, H. N.
		West, T. P.
		Woods, T. D.

(*) Indicates Company Executive Officer.

Corporals

Bethea, C. J.	Bischoff, R. J.	Boland, T. S.
Bussey, W. W.	Brady, W. P.	Culton, R. S.
Caughman, R. B.	Coward, W. A.	Dickerson, G. L.
Cottingham, J. E.	Groce, L. A.	Dreisbach, L. D.
Denny, E. R.	Hallman, W. E.	Edwards, J. L.
Garwood, S. H.	Holley, F. L.	Harper, S. D.
Lytton, K. G.	Neil, J. M.	Henry, G. C.
Riddle, J. T.	Redfern, R. B.	McAlister, P. W.
Seabrook, P. D.	Taylor, J. O.	Mace, J. S.
Styron, W. T.	Weaver, A. E.	Nance, P. M.
Walker, R. H.	Wood, F. A.	Rogers, F. E.
Wearn, W. C.		Whitehead, J. B.
		Wright, C. R.

REGIMENTAL ORGANIZATION

SECOND REGIMENT

Colonel F. Hughes----------Commander
Lieutenant Colonel T. R. Bainbridge----------Executive
Captain C. C. Gaston----------Adjutant
First Lieutenant S. L. Skardon----------Chaplain
Master Sergeant C. E. Littlejohn----------Sergeant Major
Staff Sergeant P. T. Garrett----------Color Sergeant
Staff Sergeant T. A. Murrah----------Color Sergeant

BATTALION ORGANIZATION

FIRST BATTALION

Lieutenant Colonel J. B. Moore----------Battalion Commander
Captain W. B. Boyle----------Battalion Executive
First Lieutenant J. H. Radcliffe----------Battalion Adjutant
First Lieutenant J. R. Harrison----------Battalion Supply Officer
Staff Sergeant L. B. Smith----------Battalion Sergeant Major

Company "A"	Company "B"	Company "C"
	Captains	
Crook, M.	Pope, D. T.	Herlong, H. K.
	First Lieutenants	
Carlisle, W. A.(*)	Jones, E. M.(*)	Zeigler, W. B.(*)
Abrams, E. P.	Cathcart, J. W.	Avent, H. E.
Thackston, W. H.	Miley, W. F.	Kelly, J. W.
	Second Lieutenants	
Lawton, P. S.		
	First Sergeants	
Liles, J. R.	McKeown, H.	Gray, J. F.

(*) Indicates Company Executive Officer.

Supply Sergeants

Hammond, J. G. Hunt, F. M. Rivers, P. F.

Sergeants

Blair, C. H.
Bouton, W. I.
Brown, R. F.
Cathcart, T. M.
Cleveland, E. P.
Collins, W. D.
Dunn, L. E.
Fellers, L. Q.
Furtick, O. K.
Gardner, E. G.
Harter, J. R.
Hawkins, A.
Hester, B. F.
Huckaby, J. P.
Jay, J. E.
Kerhulas, T. E.
McCord, R. L.
Mays, H. B.
Propst, M. C.
Quantz, W. P.
Reid, S. F.
Vassey, H. M.
Webb, B. L.
Boliver, W. C.
Brady, H. G.
Chandler, W. O.
Cooley, R. L.
Eadon, J. R.
Eidson, W. L.
Ellison, T. W.
Henson, S.
Ivey, J. D.
Johnson, L. M.
Kennedy, H. M.
Lindsay, J. B.
Lowder, J. M.
Mills, F. C.
Plowden, W. M.
Willis, M. D.
Woodward, L. J.
Brewer, H.
Bryant, C. K.
Buchanan, A. M.
Bullington, W. A.
Crosby, R. A.
Epting, S. W.
Gaillard, W. S.
Holcombe, R. O.
Horne, W. L.
Miller, G. M.
Mills, W. L.
Poore, F. J.
Snipes, G. L.
Williams, S. B.
Winfield, J. A.

Corporals

Bradford, H.
Driver, A. H.
Ellis, W. N.
Ferris, L. R.
Holmes, F. S.
Jackson, C. C.
Jones, J. Dargan
McKeown, W. H.
Owen, S. E.
Pitts, W. R.
Robinson, H. H.
Wentzel, D. B.
Brockman, W. D.
Christopher, J. D.
Fairey, P. W.
Foster, H. B.
McMaster, R. G.
Ross, G.
Simpson, H. V.
Stevenson, J. H.
Bull, B. R.
Davis, S. E.
Early, W. F.
Freeman, E. A.
Kirkland, R. W.
McMahan, E. O.
Murray, B. D.
Rodgers, J. R.

BATTALION ORGANIZATION

SECOND BATTALION

Lieutenant Colonel T. W. Talbert---------- Commander
Captain T. H. Heatwole---------- Executive
First Lieutenant F. E. Culvern---------- Adjutant
First Lieutenant W. L. Lafaye---------- Supply Officer
Staff Sergeant S. C. Hunt---------- Sergeant Major

Company "E"	Company "F"	Company "G"	Company "H"
		Captains	
McAlhany, H. J.	Garick, L. T.	Dunlap, F. A.	Ferree, R. J.

First Lieutenants

Hiers, M. D.(*)
Howard, T. G.
Montgomery, J. B.
Garner, A. R.(*)
Bracey, J. H.
Johnson, M. C.
Ardis, T. B.(*)
Salvo, G. C.
Vaughan, C. L.
Dobson, R. M.(*)
Bell, T. E.
Scarborough, F. H.

First Sergeants

Ragsdale, W. J.
May, D. R.
Sells, C. K.
Jones, C. L.

Supply Sergeants

Farnum, C. O.
Scarborough, R. W.
Yarborough, B. H.
Houck, J. L.

Sergeants

Bozard, L. S.
Burns, P. J.
Campbell, W. F.
Craven, F. M.
Davis, T. F.
Harling, R. E.
Irby, G. S.
Jordan, W. W.
Kirby, M. D.
Lane, C. S.
Mappus, W. A.
Marshall, R. B.
Salley, W. B.
Stewart, E. R.
Sutton, A. D.
Truluck, J. W.
Wright, M. E.
Bird, E. R.
Bryant, R. H.
Croxson, E. F.
Goodson, T. E.
Hackett, C. B.
Hardee, J. C.
Harris, H. L.
Hodges, R. F.
Jackson, W. L.
Lominack, E. K.
Oates, W. J.
Putnam, H. D.
Smith, G. L.
Todd, R.
Triplett, C. H.
Arrington, L. R.
Bull, L. H.
Burriss, T. M.
Carson, C. R.
DeMai, N.
Ehrhardt, J. S.
Ferguson, H. E.
Harley, T. R.
Harrison, B. S.
Hart, B. B.
Hayes, C. B.
Heriot, J. D.
Hughey, J. D.
Hurst, F. M.
Irick, E. F.
Lemmon, J. C.
Miller, H. F.
Murph, J. L.
Myers, C. O.
Padgett, C. A.
Ross, H. J.
Shelley, R. C.
Stokes, F. H.
Wade, W. B.
Wallace, J. W.
Ward, H. E.
Wells, F. E.
Bryan, C. B.
Grimball, T. P.
Jordan, J. E.
McKenzie, S. A.
Mazinski, R. T.
Moon, H. D.
Parrish, J. W.
Rutland, L. E.
Smith, M. T.
Truesdale, J. M.
Woody, R. E.

Corporals

Ficklin, M. T.
Fletcher, G. L.
Lesesne, E. H.
Mauney, R. V.
Osborne, J. H.
Pitchford, C. W.
Riddick, A. T.
Rutledge, T. B.
Smith, E. H.
Carder, W. H.
Colvin, R. E.
Copeland, H. C.
Garner, J. A.
Hempstead, R. L.
London, J. R.
Martin, J. L.
Shirley, James A.
Sterghos, J. D.
Welch, R. W.
Wily, R. R.
Bates, R. O.
Castles, J. F.
DesPortes, J. A.
Freeman, P. N.
Gregory, J. L.
Herrington, C. L.
Kivett, T. L.
Nalley, A. C.
O'Shields, W. R.
Smith, P. F.
Sparks, L. M.
Thornburg, R. W.
Vereen, L. C.
Brown, R. H.
Martin, E. F.
Osteen, R. T.
Padgette, C. D.
Southerlin, J. R.
Thackston, J. E.
Wilson, E. H.

(*) Indicates Company Executive Officer.

GRADUATES OF 1938

Students who rank in the upper ten per cent of the class are graduated with honor

SCHOOL OF AGRICULTURE

Bachelor of Science Degree

Agriculture—Agricultural Economics Major

Alpheus Victor Bethea—Dillon
William Green DesChamps, Jr.—Bishopville
Arthur Gibson Fletcher—McColl
Lewis Daniel Malphrus—Ridgeland
Henry Green Muldrow, Jr.—Bishopville
Clarence Edward Pike—Calhoun
Terry Edward Richardson—Barnwell

Agriculture—Agronomy Major

George William Boozer, Jr.—Leesville
James Thompson Brannon—Cassatt
John Edmond Gandy, Jr.—Niagara Falls, N. Y.
William Douglas Gregorie, Jr.—Yonges Island
James Roscoe Huff—Piedmont
Joseph Thaddeus McCrackin, Jr.—Newberry
Webb Rampy Mouchet—Starr
Charles Baring Searson, Jr.—Hampton
William Claude Smith—Johnston

Agriculture—Animal Husbandry Major

William Lide Bryant—Marion
John Thomas Graves—Ruby
Walter Allen Hills—Johns Island
Grady Henry Holman, Jr.—Blakely, Ga.
Richard Henry Holstein, Jr.—Monetta
Dendy Kyle Josey—Bishopville
Draytford Richardson—Gresham
*Johnnie Carroll Shelley—Marion

Agriculture—Dairy Major

William McKellar DuPre—Walhalla
Thomas Green Legare, Jr.—Yonges Island
*William Aull Leitner—Marion
Raymond Markley Murray—Spartanburg
William Oliver Payne—Greenville

Agriculture—Entomology Major

*John Earle McCurry—Anderson
Eley Harrison McEachern—Ridgeway
Edward Holman Smith—Abbeville

Agriculture—Horticulture Major

Frederick John Aichele, Jr.—Charleston
Ernest Edward Carnes—Hartsville
William Coleman Curry—Gray Court
James Clinkscales Hoffman—Blythewood
Boyce Miller, Jr.—Greenville
Henry Mitchell—Greenville
Joseph Peter Parker—Graniteville
Patrick Henry Starr—Walterboro
Zeb Vance, Jr.—Owings
Thomas Lawton Vereen—Latta
George Henry Wade—New York City

Agricultural Engineering

Capers Bartow Bull—Cameron
St. Clair Prothro Guess, Jr.—Denmark
Richard Howard Langston, Jr.—Florence
William Player Law, Jr.—Darlington
William Newton McAdams—Iva
Heyward Harold McKinney—Chesnee
Frank Cox Wardlaw—Belton

Agricultural Economics and Animal Husbandry Major

Alfred William Bethea—Dillon

SCHOOL OF CHEMISTRY

Bachelor of Science Degree

Chemistry

William Curry Cunningham—Williston
Thomas Earl Hall—Dillon
Donald Edward Hudgin—Greenville
Grover Cleveland Paulsen, Jr.—Ehrhardt
*Earl Charles Ray—Andrews
*Murray Jack Sarlin—Liberty
Emanuel Lawrence Zalants—Greenville

*With Honor.

SCHOOL OF ENGINEERING

Bachelor of Science Degree

Architecture

Richard Swicegood Byrd—Andrews
Donald Brevard Clayton, Jr.
Birmingham, Ala.
John Hinds Truluck, Jr.—Lynchburg
James Mathews Hunt—Elberton, Ga.
John William Linley—Anderson
Thomas Edward Stanley—Marion

Bachelor of Chemical Engineering Degree

John Wesley Adams, Jr.
Bloomingdale, Ga.
Frank Eugene Bobo, Jr.—Gray Court
John Christian Boesch—Charlotte, N. C.
Joseph Screven Brewster—Cedartown, Ga.
Jack Howard Oliver—Savannah, Ga.
William Julius Payne—Charlotte, N. C.
Thomas Eugene Ramsay—Calhoun
Harold Boyd Risher—Charleston
Charles Carr Schirmer—Charleston
Charles Edward Seigler—Anderson
Dave Robinson Stokely—New Port, Tenn.
Lake Eric Terrell, Jr.—Greenville
Albert Russell Waters—Savannah, Ga.

Bachelor of Civil Engineering Degree

Joseph Rudolph Ambrose—Georgetown
Henry Downs Byrd—Clinton
Wallace Robert Cheves—Savannah, Ga.
John Frederick Huchting, Jr.—Charleston
John William Morgan, Jr.—Savannah, Ga.
Otis Foster Morgan—Laurens
James McIver Speights—Walterboro
Guy Matthews Tarrant, Jr.—Columbia

Bachelor of Electrical Engineering Degree

Lewellyn T. Boatwright, Jr.
Ridge Spring
James Kibler Chapman—Greenwood
James Miles Culpepper—Dawson, Ga.
John Wesley Davis—Charleston
John Henry Disher, Jr.—Charleston
*William Walter Dukes, Jr.—Orangeburg
Henry Miles Faris—Clover
Richard John Farmer—Charleston
*Samuel Andral Ferguson—Eastover
Herbert Cohen Green—Florence
Theodore Marion Hoefer—Columbia
Shelton Otis Hoffman—McBee
Edward Vandiver Horton—Belton
Robert Maxwell Jenkins, Jr.—St. Charles
Jefferson Nicholas King—Williamston
Rufus Earl Lawrence, Jr.—Effingham
Calvin Miller McKeown—Chester
Thomas Center Reed, Jr.—Sumter

Bachelor of Mechanical Engineering Degree

Alexander Charles Crouch—Clemson
Richard Maynard Denny—Bishopville
Marion Rollins DeWitt—Darlington
Edward Joseph Galvanek—Carteret, N. J.
Benjamin Smith Jordan—Wadley, Ga.
Dan Somers Lesesne—Charleston
*Robert Theodore Matthew—Charleston
Evan Norton—Conway
Allen Eugene Stalvey—Conway
John Doyle Varn, Jr.—Charleston

SCHOOL OF GENERAL SCIENCE

Bachelor of Science Degree

*Frank Eubank All—Allendale
Frank Wingard Bagnal—Sumter
Francis Laney Bell—Lancaster
Forrest Blanton Bessinger—Olar
Landis Owen Carter—Varnville
David Millar Cullen—Denmark
*Russell William Dorn—Jersey City, N. J.
Kennedy Bryan Dwight—Wedgefield
Tom Bennett Gresham, Jr.—Lyman
Eugene Daniel Guyton—Marion
Frederick Vivian Harris
West Palm Beach, Fla.
Walter DuBose Huff—Hartsville
Riley Venning Jackson—Wedgefield
William Feige Krickhan, Jr.—Charleston
*William Alexander Mitchell—Clemson
Marshall Milford Motes—Mountville
John William Murray—Charleston
Milton Norton—Gibson, N. C.
James William Parker, Jr.—Ebenezer
Alfred Cook Payne—Cartersville, Ga.
Joseph Travis Seawell—Greenville
John L. Settle—Landrum
Beverly Norton Skardon—Walterboro
Hugh Gregorie Stokes, Jr.
Montgomery, Ala.
*Paul Kent Switzer—Union
Kenneth Notley Vickery—Hartwell, Ga.
Ralph Eugene Watkins, Jr.—Pendleton
John Cornish Wilkinson, Jr.—Spartanburg
Charles Alan Williamson
Ridgewood, N. J.
Robert George Witherspoon—Anderson
John Dendy McBrearty—Anderson

*With Honor.

SCHOOL OF TEXTILES

Bachelor of Science Degree

Textile Chemistry

Paul Robert Abercrombie---Gray Court
Robert Milton Denny-------Graniteville
Earl Houston Fuller----------Columbia
Edward Sture Olson---Asheville, N. C.
Rembert James Reynolds----Great Falls
Robert William Robinson-----Columbia
Allen Wise Taylor----------Charleston
William Francis Thompson
North Augusta
William Patrick Todd----------Laurens
Thomas Turner Wilheit---Augusta, Ga.
Henry A. Woodhead, Jr.----Graniteville

Textile Engineering

John William Anderson------Greenwood
John Gibson Auerhamer-------Edgefield
Power Weathers Bethea, Jr.---Greenville
John William Bolt----------Laurens
Louis Melvin Boulware-------Newberry
Alvin Frank Davis----------Greer
Woodrow Elbert Dunn--Sylacauga, Ala.
John Henry Edwards---------Batesburg
Alfred Julius Folger----------Pickens
*Harry Geisberg ----------Anderson
Robert Lee Harllee----------Florence
William Walter Harris, Jr.
Rockingham, N. C.
William Benjamin Harry--Grover, N. C.
Karl Frederick Henry Inderfurth
Mystic, Conn.
Robert Jethro Jones--------Macon, Ga.
Harold Legare Lawhon----------Union
Hubert Butler McAlister------Pendleton
Robert Ray McGee, Jr.-------Greenwood
John Wightman McSwain-Raleigh, N. C.
John Donald Marshall----Savannah, Ga.
Samuel Claud Mayne, Jr.---Winder, Ga.
Alfred Gerry New----------Greenville
Tom Earle Peden----------Gray Court
James Henry Riddle----------York
Robert Chambers Spears---------Union
*Thomas Izlar Stafford------Charleston
Darwin Taylor Wendt--East Moline, Ill.

Weaving and Designing

Arnold Lee Sanders----------Pelzer
*Alvin Stokes Sanders----------Camden
*John Clinton Shell, Jr.---------Laurens
Arthur Charles Verner--------Piedmont

SCHOOL OF VOCATIONAL EDUCATION

Bachelor of Science Degree

Vocational Agricultural Education

David Ramsey Chastain---------Pickens
Claude Henson Cooler--------Ridgeland
Dan William Evans----------Elloree
Thomas Hugh Evans----------Andrews
Wilder Sexton Funk--------St. Stephen
John Mitchell Gantt----------Jefferson
Charles Francis Gibson--------Richburg
Frank Manning Hall----------Iva
William Franklin Hancock--------Ruby
Thomas Robinson Hanna----Blacksburg
Claudieth Earl Harmon----------Gilbert
Nicholas Paul Joyner----------Ward
McMillan Lane ----------Dillon
Hubert Edward Miller--------Ridgeland
*Jewel Clint Morgan--Sale Creek, Tenn.
Andrew Gilliam Prince--------Abbeville
Robert Manning Reynolds--------Lamar
Julian Basil Rickenbaker-------Cameron
Howard Calhoun Rogers----------Clio
William West Rush----------Camden
Clifton Reece Saverance----------Elliott
Philip Claudius Sprawls---Montmorenci
Archie Clifford Thomas-------Hampton
Swain Norris Thompson----------Starr
*Alvin Ralph Wham-------Simpsonville
John Boyce Williams---------Dacusville
James Edwin Wright----------Woodruff
Jacob Frederick Wyse---------Columbia
LeGrand Iris Yarborough------Scranton

Education

Jesse Upshaw Pritchett------Griffin, Ga.

Industrial Education

Charles Leander Helms--------Bethune
Jack Brown Kirkley----------Kershaw
Coit Barnwell Lytton---Gastonia, N. C.

Textile Industrial Education

Edward Lamar Kitchens--------Laurens
Harry Russell McGowan--------Chester

PROFESSIONAL DEGREE IN CIVIL ENGINEERING

William Hayne Mills, Jr.------Columbia

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*With Honor.

FORTY-SECOND COMMENCEMENT, JUNE, 1938

Baccalaureate Sermon

THE REVEREND ERNEST NEAL ORR

Pastor of The Tabernacle Associate Reformed Presbyterian Church

Charlotte, North Carolina

Address to Graduating Class

JOHN TEMPLE GRAVES, II

Birmingham, Alabama

BACHELOR OF SCIENCE DEGREES CONFERRED FEBRUARY 1, 1938

Agriculture—Animal Husbandry Major

Kenneth Stewart Laney ---------- Cheraw

Agriculture—Horticulture Major

Frank Moultrie Hamilton ---------- Spartanburg

Agricultural Engineering

Charles Baskin Evans ---------- Abbeville
Edgar DuRant Hayes ---------- Little Rock

General Science

Clarence Edwin Ballentine ---------- Anderson
Jarvis Barnes ---------- Brunson
Robert Elliott Downey ---------- Jacksonville, Fla.
George Aimar Durban, Jr. ---------- Aiken
Thomas Woodrow Eatmon ---------- Alvin
Livingstone Rhett Wever ---------- Savannah, Georgia

Vocational Agricultural Education

Robert Harold Martin ---------- Simpsonville
Arthur Richard Thompson ---------- Bowman

Education

Garnett Milton Martin, Jr. ---------- Westminster

Industrial Education

William Herbert Cannon ---------- Rock Hill

DEGREES CONFERRED, SEPTEMBER 13, 1938

Bachelor of Science

Agriculture—Agronomy Major

William Evans Duvall, Jr.---Cheraw

Agriculture—Animal Husbandry Major

Jeremiah Glenn McMeekin---Spartanburg
Thomas Sloan McConnell---Anderson
Ralph Dozier Crosby---Miley

Agriculture—Dairy Major

Hinson Lebby Mikell---Charleston

Agricultural Engineering

John Murrell Dukes, Jr.---Sedalia

General Science

Stuart Edward Campbell---Clemson

Textile Engineering

Henry Duncan Adams---Clio
William Fred Davis---Arcadia
John Richard Federline, III---Belton
Ziza Guy Willis---Spartanburg

Weaving and Designing

Walter Johnson Crenshaw---Great Falls

Vocational Agricultural Education

William Hutson Abrams---Leo
Broughton Fulton Childress---Six Mile
Joel Osmer Crawford---Columbia
Shuler Hiller Houck---Cameron
Lawrence Hugh McCallum---Lugoff
Eugene Wallace Rochester---Salem
Loy Warwick Smith---Columbia

Industrial Education

Frank Gilbert Ballenger---Greenville
Cicero Pinckney Moorer---Harleyville

Textile Industrial Education

Campbell Coleman Brigman, Jr.---Lancaster
Edward Henry Shanklin---Clemson

Bachelor of Chemical Engineering

Henry Jake Rawl---Lexington

Bachelor of Mechanical Engineering

Jeff Davis, Jr.---Savannah, Ga.
Lee Vandoland Graham, Jr.---Savannah, Ga.
Rawley White Martin---Fort Mill

LIST OF STUDENTS, FIRST SEMESTER, 1938-1939

The names are arranged in alphabetical order and following the names are symbols indicating classes and courses. The numerals preceding the course symbols refer to classes, viz.: 1, Freshman; 2, Sophomore; 3, Junior; 4, Senior. (Classified as of first semester. See page 58.) A-Agriculture (abbreviation indicates major course for seniors): Agr-Agronomy; AH-Animal Husbandry; D-Dairy; Ag Ec-Agricultural Economics; Ag Engr-Agricultural Engineering; Ent-Entomology; Hort-Horticulture; GS-General Science; Ar-Architecture; C-Chemistry; E-Engineering (all engineering freshmen); CE-Civil Engineering; Ch Engr-Chemical Engineering; EE-Electrical Engineering; ME-Mechanical Engineering; T-Textile; TC-Textile Chemistry; WD-Weaving and Designing; V Ag Ed-Vocational Agricultural Education; Ed-Education; I Ed-Industrial Education; TIE-Textile Industrial Education; S-Special (not classified). New students admitted in September, 1938, are indicated by a dagger (†).

Name and Course	Address
Abbott, F. A. (1 T)†	Greenville
Abbott, W. W. (1 TC)†	Seneca
Abee, R. B. (2 Ar)	Hickory, N. C.
Able, S. K. (1 V Ag Ed)†	Saluda
Able, T. A. (3 CE)	Abbeville
Abrams, E. P. (4 CE)	Newberry
Acker, H. L. (3 GS)	Anderson
Ackerman, M. W. (3 ME)	Cottageville
Ackerman, W. M. (3 TC)	St. George
Ackis, H. S. (2 T)	Jacksonville, Fla.
Adams, C. A. (1 S)†	Commerce, Ga.
Adams, G. W. (2 GS)	Batesburg
Adams, P. H. (3 I Ed)	Gadsden
Addy, F. E. (1 GS)†	Saluda
Adickes, G. C. (1 GS)†	York
Agnew, J. C. P. (2 Ag Engr)	Starr
Agnew, R. E. (3 ME)	Donalds
Aiken, D. E. (1 Ag Engr)†	New Zion
Albergotti, W. M. (1 E)†	Columbia
Alderman, D. W. (1 I Ed)†	Florence
Alexander, A. J. (1 I Ed)†	Anderson
Alexander, E. D. (1 V Ag Ed)†	Starr
Alexander, H. F. (2 ME)	Columbia
Allen, H. S. (1 V Ag Ed)†	Blythewood
Allen, J. H. (2 ME)	Spartanburg
Allen, J. L. (2 T)†	Pacolet Mills
Alley, G. I. (1 E)†	Columbia
Allison, Eugene (2 T)†	Forest City, N. C.
Allison, W. A. (1 E)†	Chesnee
Alman, M. H. (1 A)†	Jonesville
Almeida, J. L. (3 I Ed)	Charleston
Alston, R. P. (1 A)†	Rembert
Altman, D. D. (1 A)†	Clio
Altman, J. R. (1 E)†	Yemassee
Ambrose, L. R. (4 ME)	Plantersville
Anderson, B. W. (2 GS)	Edgefield
Anderson, C. E. (3 T)	Seneca
Anderson, C. S. (1 E)†	Sumter
Anderson, G. J. (2 GS)	Williston
Anderson, H. N. (1 C)†	Moultrieville
Anderson, J. F. (4 I Ed)	Edgefield
Anderson, R. F. (4 Ag Ec)	Ninety Six
Anderson, R. M. (2 EE)	Chester
Anderson, W. D. (3 T)	Gastonia, N. C.
Anthony, S. H. (1 C)†	Greenville
Appley, P. L. (1 Ar)	Highlands, N. C.
Arant, L. L. (1 T)†	Ft. Motte
Arant, T. D. (2 GS)	Ft. Motte
Ardis, T. B. (4 V Ag Ed)	Dalzell
Ariail, R. L. (3 Ag Ec)	Willington
Armstrong, H. H. (1 E)†	Savannah, Ga.
Armstrong, J. D. (1 E)†	Spindale, N. C.
Armstrong, W. S. (1 T)†	Fountain Inn
Arnold, F. T. (4 Ent)	Spartanburg
Arnold, H. H. (1 V Ag Ed)	Woodruff
Arrington, L. R. (3 D)	Ninety Six
Asbill, L. C. (1 GS)†	Ridge Spring
Ashford, J. F. (2 ME)	Georgetown
Askins, P. R. (1 E)†	Hartsville
Atkinson, D. H. (1 E)†	Turbeville
Aull, C. M. (4 Ag Ec)	Newberry
Austell, J. R. (2 I Ed)	Greenville
Avent, H. E. (3 Ar)	Bennettsville
Avinger, H. C. (4 T)	Orangeburg
Awtrey, W. E. (2 EE)	West Columbia
Babb, J. M. (2 Ag Engr)	Gray Court
Bachman, C. M. (1 E)†	West Columbia
Bagnal, H. T. (3 GS)	Sumter
Bagwell, R. F. (1 T)†	Glendale
Bailes, L. C. (4 GS)	Anderson
Bailey, C. H. (2 CE)	Allendale
Bailey, H. L. (1 Ag Engr)†	Wellford
Bailey, J. R. (4 ME)	Florence
Bailey, R. B. (1 T)†	Lockhart
Bailey, W. M. (1 E)†	Summerville
Bainbridge, T. R. (4 C)	Savannah, Ga.
Baker, A. H. (2 TIE)	Clover
Baker, H. L. (1 E)†	Charleston
Baker, J. M. (3 V Ag Ed)	Hemingway
Baker, W. E. (2 CE)	Greenville
Baker, W. H. W. (1 T)†	Chester
Baldwin, J. K. (2 CE)	Lake City
Baldwin, M. C. L. (3 TC)	Rock Hill
Balfour, F. H. (2 GS)	Orlando, Fla.
Ballard, E. J. (1 E)†	Charleston
Ballard, H. G. (1 E)†	Pelzer
Ballard, V. A. (4 T)	Arcadia
Ballenger, C. D. (4 Hort)	Greer
Ballenger, P. C. (3 V Ag Ed)	Westminster
Ballentine, C. F. (4 I Ed)	Prosperity
Ballentine, G. W. (1 A)†	Easley
Ballentine, J. R. (1 T)†	Greenwood
Ballentine, R. W. (2 V Ag Ed)	Prosperity
Banister, R. A. (4 I Ed)	Greenwood
Barber, J. W. (1 E)†	Columbia
Barksdale, T. L. (1 E)†	North Augusta
Barlow, John (1 E)†	Glenolden, Pa.
Barmore, W. E. (1 A)†	Donalds
Barnes, Frank Sanders (1 E)†	Rock Hill
Barnes, Frank Stratford (1 Ar)†	Greenville
Barnette, W. A. (1 TC)†	Greenwood
Barnwell, B. S. (2 T)	Abbeville

Name and Course	Address
Barrineau, T. W. (4 V Ag Ed)	Lake City
Barron, J. I. (2 ME)	York
Barton, J. H. (1 T)†	Anderson
Baskin, J. S. (4 Ag Ec)	Bishopville
Baskin, R. R. (1 A)†	Bishopville
Baskin, T. P. (3 ME)	Anderson
Bass, T. J. (1 E)†	Latta
Batchelor, P. R. (3 A)†	Blacksburg
Bateman, F. F. (3 EE)	Columbia
Bates, R. O. (2 CE)	Moncks Corner
Baugh, V. E. (1 E)†	McColl
Baxley, B. A. (1 V Ag Ed)†	Early Branch
Baxley, J. B. (1 A)†	Barnwell
Baxley, J. R. (1 A)†	Mullins
Beach, H. L. (4 V Ag Ed)	Walterboro
Beacham, M. D. (1 E)†	Newberry
Beasley, W. A. (4 V Ag Ed)	Norway
Beaty, A. R. (1 TC)†	Seneca
Beaty, R. W. (1 GS)†	Sumter
Beaudrot, C. R. (2 ME)	Greenwood
Beaudrot, J. L. (2 ME)	Greenwood
Beaver, A. T. (1 Ed)†	Georgetown
Beckett, J. T. (2 EE)	Johns Island
Beckett, T. A. (2 A)	Johns Island
Becknell, C. A. (1 T)†	Thomaston, Ga.
Behling, L. F. (1 A)†	St. George
Belk, G. H. (1 A)†	Trenton
Bell, F. L. (S)	Clemson
Bell, H. F. (1 Ag Engr)†	Wampee
Bell, J. J. (1 E)†	Barnwell
Bell, R. N. (1 A)	Harleyville
Bell, T. E. (4 AH)	Lydia
Bell, W. M. (2 V Ag Ed)	Hartsville
Bellamy, G. G. (2 V Ag Ed)	Loris
Belue, F. W. (1 GS)†	Gaffney
Belue, H. P. (2 C)	Charlotte, N. C.
Benfield, J. K. (2 TC)	York
Benjamin, G. F. (2 ME)	Augusta, Ga.
Benjamin, Irving (1 GS)†	Bowman
Bennett, E. F. (2 V Ag Ed)	Vance
Bennett, L. E. (1 V Ag Ed)	Springfield
Bennett, Walter (2 V Ag Ed)	Orangeburg
Benson, F. D. (4 T)	Fairforest
Benton, D. A. (2 A)	Timmonsville
Berry, H. G. (2 T)†	Greenville
Berry, H. S. (2 A)	Greer
Berry, M. M. (3 GS)	Atlanta, Ga.
Berry, R. J. (2 Ag Engr)	Smoaks
Berry, R. S. (1 T)†	York
Bessent, C. F. (2 ME)	Little River
Bessent, T. A. (2 ME)	Little River
Bethea, C. J. (2 Ag Engr)	McColl
Bethea, T. C. (2 Ag Engr)	Dillon
Bethea, W. E. (2 ME)	Latta
Bethea, W. H. (3 EE)	Marion
Betsill, W. L. (1 A)†	Laurens
Bettis, J. R. (4 ME)	Greenville
Betts, J. A. (1 TC)†	Chester
Bickley, C. E. (2 T)	Pendleton
Bigger, S. P. (2 A)	York
Biggerstaff, S. C. (1 V Ag Ed)	Seneca
Bird, C. L. (1 T)†	Asheville, N. C.
Bird, E. R. (3 T)	West Asheville, N. C.
Bird, J. P. (1 Ar)†	Greenville
Bischoff, R. J. (2 C)	Summerville
Bisset, D. A. (1 Ch Engr)†	Savannah, Ga.
Black, C. V. (4 V Ag Ed)	Ward
Black, T. H. (2 Ar)	Columbia
Blackmon, C. R. (2 ME)	Timmonsville
Blackmon, R. W. (2 CE)	Timmonsville
Blackwell, B. E. (1 V Ag Ed)†	Landrum
Blackwell, G. E. (4 Hort)	Inman
Blair, C. H. (3 T)	Clemson
Blair, H. C. (2 Ar)	Sevierville, Tenn.
Blake, I. C. (3 GS)	Calhoun Falls
Blakely, J. R. (4 V Ag Ed)	Ora
Blakely, L. J. (4 V Ag Ed)	Ora
Blakeney, R. H. (2 T)	Lancaster
Blalock, J. D. (1 T)†	Enka, N. C.
Blalock, T. J. (S)†	Clemson
Blanchett, M. P. (2 T)	Abbeville
Blanton, O. H. (1 V Ag Ed)†	Nichols
Blaylock, C. S. (2 EE)	Greenwood
Blease, E. S. (2 V Ag Ed)	Saluda
Blessing, J. E. (2 A)	Kingsport, Tenn.
Blount, J. B. (1 C)†	Savannah, Ga.
Boatwright, Benjamin (1 A)†	Johnston
Boatwright, Harry (3 GS)	Seneca
Bobo, F. G. (4 GS)	Greenville
Bodie, K. J. (2 V Ag Ed)	Ward
Boesch, J. C. (S)	Clemson
Boggs, A. J. (1 C)†	Pickens
Boland, T. S. (2 T)	Blackville
Boliver, W. C. (3 TC)	Orangeburg
Bolt, J. E. (1 T)†	Calhoun Falls
Bolt, W. H. (2 ME)	Seneca
Bonds, W. J. (1 S)†	Gaffney
Bone, M. B. (3 I Ed)	Clemson
Boney, B. W. (1 V Ag Ed)†	Blythewood
Boney, F. N. (1 V Ag Ed)†	Blythewood
Bonnette, G. H. (2 A)	Ebenezer
Bookhart, H. U. (4 V Ag Ed)	Orangeburg
Boozer, Harold W. (4 T)	Clemson
Boozer, Hugh W. (1 V Ag Ed)	Leesville
Boselli, T. J. (4 ME)	Spartanburg
Boswell, R. C. (2 T)	Travelers Rest
Botts, E. O. (4 EE)	Abbeville
Botts, J. A. (1 Ch Engr)†	Abbeville
Bouknight, C. L. (1 E)†	Columbia
Boulware, J. E. (1 A)†	Newberry
Bouton, W. I. (3 GS)	Ware Shoals
Bowen, D. R. (1 Ag Engr)†	Oakway
Bowers, D. G. (1 E)†	Columbia
Bowers, G. F. (2 GS)	Luray
Boy, C. T. (1 T)†	Fort Mill
Boyce, H. K. (1 Ch Engr)†	Cross Hill
Boyd, J. A. B. (1 A)†	Blackstock
Boyd, R. R. (1 GS)†	DeLand, Fla.
Boyd, S. J. (4 C)	Laurens
Boyle, W. B. (4 ME)	Sumter
Boylston, W. L. (2 Ag Engr)	Charleston
Boys, R. W. (4 T)	Tuxedo, N. C.
Bozard, L. S. (3 Agr)	Cameron
Bracey, J. H. (4 Ch Engr)	Columbia
Brackett, M. M. (1 GS)†	Hendersonville, N. C.
Brackett, W. E. (4 Ar)	Hendersonville, N. C.
Bradbury, D. W. (3 ME)	Seneca
Bradford, Henry (2 T)	Berryton, Ga.
Bradford, S. R. (2 EE)	Greenwood
Bradley, C. F. (1 T)	Charleston
Bradley, W. F. (2 T)	Charleston
Bradshaw, R. B. (1 A)†	Cartersville, Ga.
Brady, H. G. (3 T)	Columbia
Brady, W. P. (2 T)	Columbia
Brailsford, J. F. (4 Hort)	Orangeburg
Braithwaite, Richard (2 Ch Engr)	Savannah, Ga.
Brannon, T. L. (2 V Ag Ed)	Cassatt
Brasington, B. A. (1 E)†	Darlington
Bratton, R. M. (4 V Ag Ed)	Gaffney
Brazell, E. D. (2 V Ag Ed)	Blaney
Breazeale, T. C. (1 A)†	Belton
Breazeale, W. C. (S)	Clemson
Breland, W. D. D. (2 A)	Ruffin
Brewer, Harold (3 V Ag Ed)	Lanes
Brice, A. M. (3 ME)	Clemson
Brice, T. W. (3 T)	Woodward
Bridge, R. W. (4 V Ag Ed)	Round O
Bridges, M. L. (3 V Ag Ed)	Blacksburg
Bringle, R. L. (1 E)	Parris Island

Name and Course	Address
Britton, J. D. (1 GS)†	Kingstree
Brockman, W. D. (2 GS)	Greer
Brodie, G. A. (4 Ag Ec)	Wagener
Brooks, A. L. (2 Ch Engr)	Timmonsville
Brooks, Q. P. (1 E)†	North Charleston
Brooks, W. C. (1 T)†	Prosperity
Broun, Donald (1 E)†	Wilmington, N. C.
Brown, B. V. (1 Ag Engr)†	Gaffney
Brown, C. A. (1 A)†	Starr
Brown, E. B. (1 T)†	Philadelphia, Pa.
Brown, E. R. (2 V Ag Ed)	Bishopville
Brown, H. S. (2 A)	Kingstree
Brown, J. C. (1 GS)†	Sumter
Brown, J. L. (1 T)†	Conway
Brown, J. W. (1 A)†	Starr
Brown, K. M. (1 V Ag Ed)†	Hemingway
Brown, R. F. (3 GS)	Westminster
Brown, R. H. (2 GS)	Charleston
Browne, C. H. (1 Ch Engr)†	Florence
Browning, W. B. (1 E)†	Ridgeville
Broyles, J. N. (2 A)	Townville
Brunson, J. F. (1 Ed)	Brunson
Brunson, W. L. (1 V Ag Ed)†	Brunson
Bryan, C. B. (3 CE)	Johns Island
Bryan, D. C. (1 Ch Engr)†	Swansea
Bryan, J. F. (1 E)†	Fairfax
Bryan, W. C. (3 AH)	Fairfax
Bryant, C. K. (3 EE)	Gastonia, N. C.
Bryant, F. D. (2 Ch Engr)	Marion
Bryant, G. C. (2 Ag Engr)	Dovesville
Bryant, Loyell (2 V Ag Ed)	Carthage, Tenn.
Bryant, R. H. (3 Ag Engr)	Florence
Bryce, F. J. (4 GS)	Florence
Buchanan, A. M. (3 CE)	McColl
Buchanan, H. L. (2 T)	Anderson
Buff, J. N. (1 GS)†	Elko, Ga.
Buford, W. B. (1 E)†	Clinton
Buist, Billie (1 E)†	Blackville
Bull, B. R. (2 V Ag Ed)	Cameron
Bull, L. H. (3 V Ag Ed)	Cameron
Bull, R. L. (1 V Ag Ed)†	Parler
Bullington, W. A. (2 T)	Spartanburg
Burdette, E. K. (3 EE)	Charleston
Burgess, A. F. (2 Ag Engr)	Belton
Burgess, E. C. (2 GS)	Kingstree
Burgess, G. H. (1 E)†	Fountain Inn
Burley, B. B. (2 GS)	Clemson
Burnette, H. W. (1 E)†	Belton
Burney, J. H. (2 C)	Orangeburg
Burns, P. J. (3 T)	Greenville
Burress, D. E. (4 EE)	Pendleton
Burriss, T. M. (3 I Ed)	Anderson
Burton, H. M. (1 T)†	Anderson
Burton, R. H. (4 T)	Anderson
Burton, W. E. (1 V Ag Ed)†	Ninety Six
Bussey, W. W. (2 TC)	Greenville
Butler, E. C. (2 A)	Yonges Island
Butler, G. W. (1 V Ag Ed)†	Travelers Rest
Byars, H. H. (1 I Ed)†	Liberty
Byrd, R. D. (1 I Ed)†	Prosperity
Byrd, W. C. (2 CE)	Clinton
Caddelle, C. E. (1 E)†	Hartsville
Cain, J. N. (1 Ag Engr)†	Sumter
Cain, W. T. (3 Hort)	Eastover
Caldwell, T. H. (2 V Ag Ed)	Ruffin
Calhoun, F. H. H. (4 CE)	Clemson
Calhoun, R. A. (2 CE)	Ringgold, Ga.
Callaway, J. M. (1 E)†	Myrtle Beach
Cameron, A. N. (2 CE)	Anderson
Campbell, C. M. (1 Ag Engr)†	Sheldon
Campbell, F. M. (1 S)†	Pelzer
Campbell, L. T. (1 A)†	Anderson
Campbell, W. F. (3 I Ed)	Anderson
Cannon, C. D. (2 ME)	Hemingway
Cannon, J. E. (2 TC)	Hartsville
Cannon, O. B. (1 C)†	Newberry
Cantey, B. O. (4 GS)	Sumter
Cantrell, M. C. (2 V Ag Ed)	Spartanburg
Cantrell, W. R. (1 E)†	Spartanburg
Carder, W. H. (2 TC)	Inman
Cargill, T. C. (1 E)†	Columbia
Carlisle, W. A. (4 Ar)	Spartanburg
Carlson, Paavo (4 Ar)	Brooklyn, N. Y.
Carmichael, A. C. (1 A)	Scranton
Carnes, J. E. (1 GS)	Lancaster
Carns, A. L. (1 A)†	Columbia
Carpenter, C. T. (1 TC)†	Kings Mountain, N. C.
Carson, C. R. (3 C)	Anderson
Carson, R. G. (4 WD)	Orangeburg
Carson, W. H. (1 T)†	Orangeburg
Cartee, J. K. (1 V Ag Ed)†	Liberty
Carter, C. A. (1 E)†	Charleston
Carter, C. L. (2 V Ag Ed)	Salters
Carter, D. S. (1 C)†	Ridgeland
Carter, J. D. (2 V Ag Ed)	Leo
Carter, J. R. (3 V Ag Ed)†	Fort Lawn
Carter, S. O. (1 C)†	Maywood, Ill.
Casale, R. S. (2 Ch Engr)	New York, N. Y.
Cash, F. G. (1 T)†	Tucapau
Cason, L. L. (3 C)	Williamston
Cason, W. S. (4 CE)	Garnett
Castles, J. F. (2 EE)	Winnsboro
Caston, B. A. (1 V Ag Ed)†	Pageland
Cathcart, J. W. (4 GS)	Winnsboro
Cathcart, T. M. (3 GS)	Bishopville
Caughman, R. B. (2 ME)	Columbia
Caughman, R. H. (3 AH)	Leesville
Cauthen, R. H. (3 T)	Columbia
Cecil, D. W. (1 Ar)†	Spartanburg
Champion, T. M. (3 T)	Union
Chandler, A. W. (1 E)†	Anderson
Chandler, J. F. (4 CE)	Seneca
Chandler, W. O. (3 CE)	Piedmont
Chaplin, J. F. (1 Ag Engr)†	Lamar
Chapman, A. D. (4 V Ag Ed)	Fair Play
Chapman, A. H. (4 Ar)	Spartanburg
Chapman, R. G. (2 A)	Greenville
Charles, Jack (2 WD)	Piedmont
Chastain, R. C. (1 V Ag Ed)†	Pickens
Chastain, W. B. (2 V Ag Ed)	Pickens
Chastain, W. H. (1 V Ag Ed)†	Taylors
Cheatham, F. C. (2 T)	Greenwood
Cheatham, R. L. (1 T)†	Abbeville
Cheezem, W. L. (1 GS)†	Andrews
Chitty, H. M. (2 A)	Gainesville, Fla.
Chovan, P. B. (4 Ed)	Bethlehem, Pa.
Christopher, J. D. (2 TC)	Greenville
Chuharski, Joseph (2 I Ed)	Pemberwick, Conn.
Citron, L. A. (4 EE)	Columbia
Clark, J. R. (1 A)†	Columbia
Clark, W. H. (1 GS)†	Ocala, Fla.
Clark, W. M. (1 E)†	Johnston
Clawson, C. H. (2 Ar)	Rock Hill
Clay, N. P. (1 TC)†	Greenville
Clegg, C. R. (S)	Liberty
Cleveland, E. P. (3 T)	Marietta
Cline, W. E. (2 ME)	Newton, N. C.
Clowney, J. Y. (1 Ch Engr)†	Columbia
Coakley, F. H. (2 A)	Washington, D. C.
Coakley, G. E. (2 A)	Washington, D. C.
Cobb, C. D. (3 T)	Belton
Cobb, M. D. (S)†	Westminster
Cochran, R. P. (3 GS)	Charleston
Cofer, W. O. (4 V Ag Ed)	Wagener
Coggins, A. E. (2 V Ag Ed)	Inman
Cogswell, G. W. (1 E)†	Charleston
Cohen, Edward (3 TC)	Clemson
Coker, G. R. (4 GS)	Turbeville

Name and Course	Address
Coker, L. W. (1 E)†	Turbeville
Coker, R. C. (1 V Ag Ed)†	Laurens
Coker, T. H. (2 GS)	Hartsville
Coleman, A. B. (1 GS)†	Pamplico
Coleman, A. J. (4 GS)	Aiken
Coleman, C. L. (3 Ar)	Wilmington, Del.
Coleman, D. B. (2 V Ag Ed)	Saluda
Coleman, H. A. (1 E)†	Mt. Pleasant
Coleman, J. R. (1 E)†	Pamplico
Coleman, R. W. (4 GS)	Hyman
Coleman, W. D. (4 AH)	Bamberg
Coleman, W. J. (3 GS)	Aiken
Coleman, W. S. (4 V Ag Ed)	Anderson
Collins, W. A. (1 E)†	Greenwood
Collins, W. D. (3 I Ed)	Inman
Coltrane, R. A. (1 E)†	Columbia
Colvin, J. S. (1 E)†	Chester
Colvin, R. E. (2 C)	Darlington
Commander, G. C. (3 CE)	Florence
Compton, E. S. (1 I Ed)†	Greenwood
Compton, G. W. (2 I Ed)	Union
Condon, W. J. (1 E)†	Charleston
Cone, G. E. (1 V Ag Ed)†	Brunson
Connell, N. G. (2 V Ag Ed)	Camden
Cook, H. L. (3 EE)	Owings
Cook, J. C. (4 ME)	Sumter
Cook, O. K. (3 V Ag Ed)	Prosperity
Cook, R. E. (1 E)†	Owings
Cooler, C. L. (1 V Ag Ed)†	Ridgeland
Cooler, E. W. (2 A)	Sheldon
Cooley, R. L. (3 V Ag Ed)	Chesnee
Cooner, A. W. (2 Ch Engr)†	Batesburg
Cooper, H. M. (4 Ch Engr)	Charleston
Cooper, R. A. (1 E)†	San Juan, P. R.
Cooper, R. L. (1 A)†	Simpsonville
Cope, G. B. (1 E)†	Cope
Copeland, H. C. (2 T)	Newport News, Va.
Copeland, H. J. (2 A)	Newport News, Va.
Copeland, J. F. (4 GS)	Timmonsville
Copeland, Neil (2 EE)	Timmonsville
Copeland, O. L. (4 Agr)	Ehrhardt
Copley, W. M. (3 EE)	North Matewan, W. Va.
Corbett, L. W. (2 GS)	Bishopville
Corley, D. K. (1 A)†	Lexington
Corley, E. J. (2 A)†	Lexington
Corn, L. E. (3 EE)	Woodruff
Correll, H. M. (2 Ch Engr)	York
Cosgrove, H. H. (4 WD)	North Augusta
Cothran, P. C. (2 CE)†	Greenville
Cottingham, J. E. (2 Ag Engr)	Dillon
Cottingham, J. M. (1 A)†	Dillon
Couch, J. H. (2 T)	Easley
Couch, K. O. (1 V Ag Ed)†	Easley
Covington, H. M. (4 Hort)	Bennettsville
Covington, J. C. (4 GS)	Columbia
Coward, W. A. (2 A)	Aiken
Cox, A. Z. (2 TC)	Hardeeville
Cox, H. C. (2 ME)	Johnsonville
Cox, J. E. (2 CE)	Conway
Cox, J. L. (1 T)†	Belton
Cox, J. M. (1 I Ed)†	Greenville
Cox, W. F. (1 S)†	Tomnolen, Miss.
Cox, W. T. (4 GS)	Belton
Coyle, B. M. (2 CE)	Columbia
Cranford, M. H. (2 T)	Chester
Cranford, W. O. (1 T)†	Kings Mountain, N.C.
Craven, F. M. (2 GS)	Florence
Crawford, K. L. (1 E)†	Calhoun
Crawford, N. D. (4 GS)	Clemson
Crayton, T. W. (2 GS)	Anderson
Creel, L. E. (3 V Ag Ed)†	Poston
Crews, M. S. (3 TC)†	Laurens
Crews, S. F. (1 I Ed)†	Hampton
Crocker, T. J. (2 Ch Engr)	Charleston
Crook, Martin (4 GS)	Spartanburg

Name and Course	Address
Crosby, D. D. (4 CE)	Chester
Crosby, R. A. (3 EE)	Ruffin
Crosland, Daniel (1 A)†	Aiken
Crouch, H. J. (2 I Ed)	Elko
Crouch, H. L. (1 V Ag Ed)†	Saluda
Crouch, H. M. (4 Agr)	Saluda
Crow, Smith (1 T)†	Drayton Mills
Crowder, M. M. (1 Ag Engr)†	Strother
Crowell, G. L. (1 E)†	Chappells
Croxson, E. F. (3 CE)	Charlotte, N. C.
Crumbley, J. C. (3 Ch Engr)	Charleston
Culbreth, H. R. (1 V Ag Ed)†	Inman
Culler, J. C. (2 A)	Wolfton
Culton, R. S. (2 EE)	Corazal, Canal Zone
Culvern, F. E. (4 T)	Kershaw
Cunningham, C. D. (2 I Ed)	Liberty Hill
Cushman, Geddings (1 E)†	Aiken
Dabbs, C. F. (1 E)†	Sumter
Dangerfield, C. M. (1 V Ag Ed)†	Oakley
Dantzler, L. A. (1 V Ag Ed)†	Eutawville
Dantzler, P. H. (3 V Ag Ed)	Parler
Darby, W. M. (2 CE)	Beaufort
Darrin, S. W. (1 T)	Spartanburg
Darwin, D. P. (3 ME)	Gaffney
Davant, Charles (2 GS)†	Columbia
Davant, F. D. (1 GS)†	Columbia
Davenport, J. D. (1 GS)†	Greenville
Davenport, W. W. (1 GS)†	Greenville
Davis, C. S. (1 GS)†	Orlando, Fla.
Davis, H. F. (1 A)†	Centenary
Davis, J. W. (S)	Charleston
Davis, N. R. (4 Ag Ec)	Norway
Davis, S. E. (2 Ch Engr)	Brunswick, Ga.
Davis, T. F. (3 GS)	Orlando, Fla.
Davis, W. O. (1 A)	Centenary
Day, R. B. (1 Ch Engr)†	Atlanta, Ga.
Dean, J. F. (1 E)†	Sumter
Deitz, J. F. (2 GS)	Hickory, N. C.
DeLany, A. H. (1 E)†	Greenville
Dellastatious, A. E. (2 ME)	Starr
Dellastatious, F. A. (1 T)†	Washington, D. C.
Dellinger, W. F. (2 EE)	Spartanburg
DeLoach, A. J. (4 V Ag Ed)	Scotia
DeLoach, L. A. (4 I Ed)	Savannah, Ga.
DeMai, Nicholas (3 GS)	Rocky Mount, N. C.
Demosthenes, H. J. (2 Ar)	Parris Island
Denny, E. R. (2 ME)	Columbia
Denny, H. S. (2 I Ed)	Bishopville
Dent, H. N. (2 Ag Engr)	St. Matthews
Derrick, W. G. (2 V Ag Ed)	Johnston
DesPortes, J. A. (2 T)	Fort Mill
Dewey, C. A. (4 ME)	Asheville, N. C.
Dickerson, G. L. (2 T)	Spartanburg
Dickert, Y. J. (S)†	Newberry
Dicks, N. R. (2 T)	Barnwell
Dillard, W. T. (3 Ed)†	Decatur, Ga.
Dixon, J. E. (4 GS)	Columbia
Dixon, J. H. (1 GS)†	Anderson
Dixon, J. S. (3 Ag Engr)	Bishopville
Dobbins, F. G. (2 A)	Townville
Dobbins, R. B. (1 T)†	Rock Hill
Dobson, C. B. (2 A)	Greer
Dobson, C. D. (3 ME)	Greenville
Dobson, R. M. (4 Hort)	Greer
Donly, W. H. (1 GS)†	Columbia
Donovan, W. H. (1 E)†	Wadley, Ga.
Dorn, K. J. (1 GS)†	Florence
Dorn, O. G. (1 Ag Engr)†	Sumter
Douglas, S. Z. (2 CE)	DeLand, Fla.
Doux, J. T. (3 TC)	Charlotte, N. C.
Dozier, C. L. (1 C)†	Orlando, Fla.
Dreher, J. B. (3 V Ag Ed)	Columbia
Dreisbach, L. D. (2 EE)	Columbia
Drennan, R. F. (1 TC)†	Rock Hill
Drew, P. N. (4 EE)	Columbia

Name and Course	Address
Driver, A. H. (2 Ch Engr)	Aiken
DuBose, E. E. (2 T)	Oswego
DuBose, Frank (1 Ag Engr)†	Camden
Ducworth, E. T. (1 A)†	Anderson
Ducworth, W. W. (1 A)†	Anderson
Dudley, A. C. (2 V Ag Ed)	Mullins
Duke, A. A. (1 V Ag Ed)†	Walhalla
Dukes, J. L. (2 CE)	St. George
Dukes, O. S. (3 Ar)	Aiken
Dukes, R. C. (2 EE)	Orangeburg
Duncan, A. A. (1 C)†	Bath
Duncan, D. D. (2 T)	Blacksburg
Dunham, C. F. (2 CE)	Anderson
Dunham, E. W. (2 T)	Durham, N. C.
Dunlap, F. A. (4 GS)	Rock Hill
Dunlap, G. M. (2 T)	Tucapau
Dunn, A. B. (2 Ch Engr)	Bethlehem, Pa.
Dunn, L. E. (3 V Ag Ed)	Pelzer
DuPre, F. A. (1 E)†	Abbeville
Durant, H. S. (2 ME)	Savannah, Ga.
Durban, F. W. (4 GS)	Aiken
Dusenbury, J. D. (1 A)	Florence
Duvall, J. E. (3 ME)	Bennettsville
Eaddy, C. M. (2 V Ag Ed)	Hemingway
Eaddy, L. L. (2 V Ag Ed)	Hemingway
Eadon, J. R. (3 T)	Manning
Earle, James B. (2 CE)	Charlotte, N. C.
Earle, Joe B. (3 V Ag Ed)	Central
Early, W. F. (2 Ar)	Florence
Edens, M. B. (1 GS)†	Pickens
Edmonds, J. L. (2 T)	Orangeburg
Edwards, C. R. (1 GS)†	Varnville
Edwards, D. T. (1 A)†	Latta
Edwards, E. G. (1 GS)†	Columbia
Edwards, G. T. (2 EE)	Rowesville
Edwards, G. W. (1 E)†	Gresham
Edwards, J. A. (2 T)	Fountain Inn
Edwards, J. C. (1 T)†	Seneca
Edwards, J. L. (2 ME)	Florence
Ehrhardt, J. S. (3 GS)	Charleston
Eidson, W. L. (3 AH)	Ward
Elledge, L. D. (1 V Ag Ed)†	Ware Shoals
Elliott, R. H. (1 E)†	Summerton
Ellis, R. H. (1 E)†	Little River
Ellis, W. N. (2 GS)	Greenwood
Ellison, C. E. (1 E)	Greer
Ellison, T. W. (3 T)	Columbia
Elmore, F. B. (3 Ch Engr)	Hardeeville
Elmore, H. H. (2 V Ag Ed)	Mooresboro, N.C.
Elphick, C. C. (2 Ch Engr)	Greenville
Embody, C. F. (2 TC)	Summit Hill, Pa.
Embree, F. P. (1 E)†	Greenville
Epps, D. E. (1 V Ag Ed)	Latta
Epps, J. C. (1 A)†	Kingstree
Epps, J. W. (2 Ar)	Kingstree
Epting, C. E. (1 Ar)†	Greenville
Epting, S. W. (3 V Ag Ed)	Newberry
Erwin, P. N. (2 Ar)	Albany, Ga.
Eskew, W. T. (2 T)	Anderson
Eubanks, L. C. (1 Ag Engr)†	Aiken
Eudy, J. B. (2 S)†	Oakboro, N. C.
Evans, A. M. (4 T)	Abbeville
Evans, C. E. (1 I Ed)†	Orangeburg
Evans, J. Hayward (2 V Ag Ed)	Six Mile
Evans, L. N. (3 I Ed)	Six Mile
Evans, L. S. (1 E)†	Cheraw
Eve, Pinckney (2 A)	Burton
Ewart, J. A. (2 E)†	Blackstock
Exum, C. P. (1 GS)†	Sumter
Fairey, P. W. (2 GS)	St. Matthews
Falls, M. E. (3 Ar)	Asheville, N. C.
Fant, J. R. (2 T)†	Lockhart
Farmer, C. H. (1 GS)†	Allendale
Farmer, J. G. (3 ME)	Anderson
Farmer, R. S. (2 EE)	Charleston
Farnum, C. O. (3 ME)	Orangeburg
Faulkner, T. C. (1 E)†	McCormick
Faulkner, W. M. (1 A)†	Kings Creek
Feinstein, Harry (4 EE)	Clemson
Fellers, H. H. (1 A)†	Prosperity
Fellers, L. O. (3 T)	Columbia
Fellers, R. C. (3 T)	Prosperity
Fender, W. C. (2 GS)	Branchville
Fendley, F. J. (1 V Ag Ed)†	Salem
Fennell, R. C. (1 V Ag Ed)†	Loris
Fenstemacher, E. R. (3 D)	Greeneville, Tenn.
Ferguson, B. E. (1 Ch Engr)†	Abbeville
Ferguson, H. E. (3 GS)	McCormick
Ferguson, J. G. (1 Ch Engr)†	Winnsboro
Ferguson, J. H. (3 Ent)	Toccoa, Ga.
Ferguson, T. D. (3 T)	Abbeville
Ferree, R. J. (4 Hort)	Campobello
Ferrier, R. C. (1 C)†	Clemson
Ferris, L. R. (2 V Ag Ed)	Orangeburg
Ficklin, M. T. (2 T)	Greenwood
Fickling, R. B. (4 Agr)	Blackville
Fitch, J. P. (1 V Ag Ed)†	Lake City
Flathmann, E. R. (3 EE)	Charleston
Fleetwood, H. G. (3 T)	Clemson
Fleming, F. M. (2 A)	Langford
Fletcher, B. A. (2 WD)†	Rock Hill
Fletcher, G. L. (2 A)	McColl
Fletcher, Nicholas (2 A)	McColl
Floyd, Carl (1 Ch Engr)†	Greenville
Floyd, E. E. (2 CE)	Lake City
Floyd, G. W. (2 A)	Conway
Floyd, J. H. (1 V Ag Ed)†	Olanta
Floyd, J. R. (1 S)†	Newberry
Floyd, L. O. (1 E)†	Scranton
Fogle, H. L. (2 TC)	Orangeburg
Fomby, H. C. (1 A)†	Orangeburg
Ford, P. G. (4 CE)	Clover
Ford, Z. T. (2 A)	Nichols
Forester, R. C. (3 T)	Sumter
Forrester, H. S. (3 Ar)	Greenville
Forrester, L. J. (1 E)†	Greenville
Forsythe, R. G. (3 Ch Engr)	Hendersonville, N. C.
Fortunato, F. J. (1 T)†	Bethlehem, Pa.
Foster, H. B. (2 T)	Greenville
Foster, H. E. (4 T)	Pendleton
Foster, I. J. (4 D)	Chesnee
Foster, J. B. (2 Ar)	Union
Foster, J. W. P. (1 GS)	Summerville
Foster, S. V. (1 V Ag Ed)†	Gaffney
Foster, S. W. (1 T)†	Fort Mill
Foster, W. C. (1 I Ed)†	Spartanburg
Foster, W. J. (1 E)†	Spartanburg
Foster, W. T. (4 D)	Chesnee
Foster, W. W. (3 T)	Greenville
Fowler, F. K. (1 A)†	Kelton
Fowler, J. D. (1 A)†	Forest City, N. C.
Fox, F. M. (1 T)†	Batesburg
Frank, Morton (2 WD)	Philadelphia, Pa.
Franks, C. H. (1 GS)†	Laurens
Frazier, J. B. (4 T & WD)	Blair
Frazier, J. R. (3 CE)	Blair
Frazier, W. H. (4 EE)	Dothan, Ala.
Free, B. D. (1 I Ed)†	Ninety Six
Freeman, E. A. (2 Ch Engr)	Anderson
Freeman, P. N. (2 ME)	Clemson
Fritts, G. H. (1 V Ag Ed)†	Lenoir City, Tenn.
Frowein, J. N. (1 A)†	Clinton
Fulmer, H. P. (2 A)	Chapin
Fulmer, R. B. (3 T)	Leesville
Fulmer, T. D. (4 TC)	Saluda
Furman, E. P. (1 GS)†	Allendale
Furtick, C. W. (1 GS)†	Springfield
Furtick, O. K. (3 V Ag Ed)	Springfield
Fuseler, H. W. (3 EE)	Charleston

Name and Course	Address
Gaddy, F. D. (1 E)†	Lake View
Gage, G. W. (3 T)	Anderson
Gage, T. W. (1 E)†	Anderson
Gaillard, W. M. (2 EE)	Eutawville
Gaillard, W. S. (3 AH)	Eutawville
Galway, J. E. W. (1 E)†	Greenville
Gamble, J. B. (1 E)†	Turbeville
Gambrell, D. H. (3 A)	Seneca
Gandy, A. P. (4 Ag Ec)	Hartsville
Gantt, P. A. (4 V Ag Ed)	Jefferson
Garbade, A. B. (1 GS)†	Ridgeland
Gardner, E. G. (3 Ar)	Lancaster
Gardner, F. R. (2 E)†	Savannah, Ga.
Gardner, H. R. (1 GS)†	Lancaster
Gardner, L. E. (3 CE)	Chesterfield
Gardner, W. A. (2 A)	Hartsville
Gardo, Norman (1 GS)†	Arcadia
Garfinkel, Nathan (1 T)†	Charleston
Garick, L. T. (4 C)	Hopkins
Garner, A. R. (4 EE)	Timmonsville
Garner, J. A. (2 ME)	Hartsville
Garrett, J. S. (2 T)	Norris
Garrett, P. T. (3 EE)	Fountain Inn
Garrett, T. M. (2 T)	Norris
Garrett, W. C. (1 GS)†	Charlotte, N. C.
Garrison, J. S. (3 GS)	Seneca
Garrison, T. E. (1 V Ag Ed)†	Anderson
Garwood, S. H. (2 A)	Sumter
Gaskins, J. L. (4 V Ag Ed)	Timmonsville
Gasque, J. S. (1 I Ed)†	Conway
Gaston, C. C. (4 T)	Charleston
Gaston, J. D. (2 A)	Carrollton, Ga.
Gates, W. F. (4 T)	Anderson
Gay, M. P. (2 V Ag Ed)	Kershaw
Geer, R. M. (4 Ar)	Clemson
Genet, G. R. F. (1 C)†	Georgetown
Gettys, B. W. (1 E)†	Lugoff
Gettys, R. E. (1 A)†	Lugoff
Gheesling, E. B. (1 S)†	Norwood, Ga.
Gianpaolo, N. J. (2 Ed)	Derby, Conn.
Gibert, J. W. (4 Hort)	Rodman
Gibson, F. M. (1 TC)†	Greenville
Gibson, H. C. (4 V Ag Ed)	Greenville
Gifford, R. S. (2 T)	Estill
Gilchrist, H. A. (4 GS)	Edgefield
Gillespie, R. M. (3 CE)	Seneca
Gilliam, L. G. (3 CE)	Union
Gilmore, W. C. (1 T)†	Greenville
Ginn, W. N. (2 ME)	Varnville
Gleason, R. N. (1 V Ag Ed)†	Seneca
Glenn, D. M. (1 T)†	Union
Glenn, J. P. (2 ME)	Anderson
Glenn, Joe Davis (1 E)†	Fair Play
Glenn, J. Douthit (1 E)†	Pendleton
Glenn, R. M. (1 T)†	Anderson
Glenn, W. E. (1 T)	Cheraw
Glover, J. B. (1 WD)	St. Louis, Mo.
Glymph, B. H. (3 V Ag Ed)	Fair Play
Goblet, G. F. (1 I Ed)†	Mt. Pleasant
Godfrey, J. B. (1 A)	Gaffney
Godfrey, J. H. (1 T)†	Fort Mill
Godsey, J. C. (2 Ch Engr)†	Laurens
Goins, C. A. (4 GS)	Anderson
Golding, E. V. (3 EE)	Waterloo
Goodman, J. L. (1 E)†	Clemson
Goodman, J. R. (1 E)†	Clemson
Goodman, J. S. (1 E)†	Clemson
Goodman, M. R. (1 E)†	Rock Hill
Goodman, S. B. (1 E)†	Mountville
Goodson, T. E. (3 Ar)	Hartsville
Goolsby, R. D. (1 V Ag Ed)†	Apopka, Fla.
Gore, J. P. (3 EE)	Greenwood
Gore, N. V. (2 T)	Greenwood
Gorman, Henry (1 Ch Engr)†	Greenville
Gormley, C. J. (4 TC)	Charleston
Graham, A. D. (3 TC)	Rock Hill
Graham, C. C. (1 V Ag Ed)†	Mt. Ulla, N. C.
Graham, J. B. (1 V Ag Ed)†	Naranja, Fla.
Graham, J. H. (1 A)†	Anderson
Graham, R. L. (1 E)†	Greenville
Gramling, A. C. (1 V Ag Ed)†	Orangeburg
Gramling, F. W. (2 V Ag Ed)	Orangeburg
Gramling, R. M. (3 V Ag Ed)	Orangeburg
Gramling, W. H. (2 V Ag Ed)	Orangeburg
Grantham, D. L. (1 Ar)†	Savannah, Ga.
Grantham, J. R. (3 V Ag Ed)	Dillon
Graves, C. C. (1 GS)	Pageland
Graves, J. L. (2 V Ag Ed)	Ravenel
Gray, F. F. (2 ME)	Greenville
Gray, J. F. (3 D)	Chester
Gray, W. J. (1 V Ag Ed)†	Allendale
Gray, Zack (4 T)	Gray Court
Grayson, J. H. (1 V Ag Ed)†	Yonges Island
Grayson, L. A. (2 EE)	Hardeeville
Green, A. B. (1 GS)†	Clayton, Ga.
Green, F. D. (1 GS)	Rock Hill
Green, G. B. (2 EE)	Columbia
Greene, C. E. (1 GS)	Anderson
Greene, C. L. (2 EE)	Williston
Greene, Wm. A. (3 T)	Orangeburg
Greene, Wilson (1 GS)†	Sumter
Gregg, F. A. (1 GS)†	Mars Bluff
Gregg, H. R. (2 A)	Florence
Gregory, J. F. (2 C)	Pauline
Gregory, J. L. (2 T)	Lockhart
Gregory, P. A. (1 T)†	Marietta, Ga.
Griffin, E. W. (4 C)	Belton
Griffin, J. R. C. (1 T)†	Anderson
Griffith, J. B. (1 A)†	Liberty
Grimball, I. H. (3 T)	Greenville
Grimball, T. P. (3 CE)	Johns Island
Groce, L. A. (2 Ar)	Lyman
Groot, H. A. (1 C)†	Charleston
Guerard, E. P. (4 Ar)	Columbia
Guerry, F. P. (4 V Ag Ed)	Kingstree
Guess, J. B. (2 A)	Denmark
Guess, J. H. (4 GS)	Denmark
Guest, T. F. (1 Ar)†	Marietta
Gulley, A. A. (1 S)†	Elberton, Ga.
Guy, R. A. (4 TC)	Chester
Guyton, G. G. (3 TC)	Sumter
Guyton, R. A. (2 V Ag Ed)	Marion
Gwin, C. W. (2 A)†	Augusta, Ga.
Hackett, C. B. (3 T)	Spartanburg
Haddon, F. J. (1 Ch Engr)†	Greenwood
Haden, A. J. (1 E)†	Brooklyn, N. Y.
Hair, B. B. (2 T)†	Fountain Inn
Hale, H. R. (2 TC)	Kingsport, Tenn.
Hall, C. W. (1 V Ag Ed)†	Mt. Ulla, N. C.
Hall, H. P. (3 ME)	Clemson
Hall, J. K. (1 C)†	Kannapolis, N. C.
Hall, L. W. (3 V Ag Ed)	Iva
Hall, R. T. (2 TC)	Cassatt
Hall, T. V. (2 A)†	Spruce Pine, N. C.
Hall, W. A. (2 GS)	Keyport, Wash.
Hallman, W. E. (2 Ar)	Aiken
Hambright, C. I. (1 GS)†	Greenville
Hambright, M. T. (4 V Ag Ed)	Grover, N. C.
Hamer, J. R. (2 A)	Clio
Hamilton, Bruce (1 V Ag Ed)†	Fort Mill
Hamilton, G. R. (2 A)	Anderson
Hamilton, Jack Edward (2 T)	Anderson
Hamilton, John Elmore (1 GS)†	Graniteville
Hammett, M. T. (1 E)†	Great Falls
Hammond, C. E. (1 E)†	Fairfax
Hammond, J. G. (3 T)	Greenwood
Hammond, L. C. (1 A)†	Seneca
Hampton, C. O. (1 E)†	Lockhart
Hance, G. W. (3 V Ag Ed)	Heath Springs
Hancock, D. W. (2 A)	Ruby

Name and Course	Address
Hane, G. M. (1 E)†	Columbia
Hanna, Dalton (1 A)†	Leo
Hanna, H. H. (3 D)	Blacksburg
Hanna, L. G. (3 V Ag Ed)	Hemingway
Hardee, Edgar (1 V Ag Ed)†	Conway
Hardee, J. C. (3 Agr)	Loris
Harley, C. W. (1 T)†	Lancaster
Harley, J. H. (1 CE)	St. George
Harley, T. R. (3 C)	Hartsville
Harling, R. E. (2 ME)	Inman
Harmon, K. S. (4 V Ag Ed)	Gaffney
Harmon, L. C. (2 TC)†	Concord, N. C.
Harmon, M. N. (3 V Ag Ed)	Lexington
Harmon, S. N. (1 A)†	Gilbert
Harpe, A. S. (1 V Ag Ed)†	Aynor
Harper, J. J. (3 ME)	Seneca
Harper, S. D. (2 CE)	Florence
Harper, S. M. (2 EE)	Andrews
Harper, W. E. (1 E)†	Honea Path
Harrington, L. B. (1 V Ag Ed)†	Manning
Harris, H. L. (3 V Ag Ed)	Conway
Harris, M. E. (2 A)	Harlan, Ky.
Harris, W. M. (1 V Ag Ed)†	Westminster
Harrison, A. A. (1 S)†	Samson, Ala.
Harrison, B. S. (3 GS)	Rocky Mount, N. C.
Harrison, E. L. (2 E)	Georgetown
Harrison, J. H. (4 ME)	Troy
Harrison, J. R. (3 CE)	Georgetown
Hart, B. B. (2 TC)	Anderson
Harter, J. R. (3 V Ag Ed)	Fairfax
Hartley, J. C. (2 EE & ME)	Greenwood
Harvey, J. M. (1 Ch Engr)†	Jacksonville, Fla.
Hasell, S. M. (1 E)†	Charleston
Hawkins, Alfred (3 ME)	Gaffney
Hawkins, B. V. (3 A & V Ag Ed)†	Campobello
Hawkins, J. V. (1 Ag Engr)†	Hartsville
Hawkins, M. R. (1 Ch Engr)†	Charleston
Hawkins, T. P. (3 Ar)	Greenville
Hawkins, W. C. (1 I Ed)†	Central
Hayden, E. A. (2 ME)†	Augusta, Ga.
Hayes, C. B. (3 T)	Lyman
Hayes, J. P. (4 V Ag Ed)	Nichols
Heape, J. M. (3 T)	Charleston
Hearon, R. L. (3 Ag Engr)	Bishopville
Heatwole, T. H. (4 TC)	Arlington, Va.
Hedden, F. H. (1 Ag Engr)†	Walhalla
Hegler, T. C. (1 T)†	Kershaw
Heinsohn, J. H. (1 E)†	Charleston
Hemphill, J. C. (1 Ar)†	Columbia
Hemphill, R. A. (2 GS)	Trenton
Hempstead, R. L. (2 Ch Engr)	Abbeville
Henderson, G. C. (1 T)†	Greenwood
Henderson, H. C. (1 E)†	Charlotte, N. C.
Henderson, J. C. (1 E)	Greenville
Henderson, J. R. (2 EE)	Verdery
Henderson, R. P. (2 A)	Ninety Six
Henderson, W. N. (2 Ag Engr)	Ninety Six
Henderson, W. T. (4 T)	Greenville
Hendricks, B. L .(4 AH)	Dacusville
Hendricks, G. H. (3 T)	Easley
Hendrix, C. E. (4 Ag Engr)	Greenville
Hendrix, G. B. (1 V Ag Ed)†	Lexington
Hendrix, T. M. (2 EE)	Prosperity
Heniford, B. M. (3 A)†	Loris
Henriquez, G. D. (2 A)	Havana, Cuba
Henry, G. C. (2 T)	Spartanburg
Henry, R. E. S. (2 ME)	Clemson
Henry, R. L. (4 ME)	Simpsonville
Henry, W. J. (1 TC)†	Chester
Henson, S. (3 T)	Spartanburg
Heriot, J. D. (3 Ag Engr)	Dalzell
Herlong, D. C. (1 V Ag Ed)†	Johnston
Herlong, H. K. (4 Ag Engr)	Spartanburg

Name and Course	Address
Herndon, F. M. (2 T)	Anderson
Herrington, C. L. (2 A)	Waynesboro, Ga.
Hester, B. F. (3 T)	St. George
Hester, Robert (4 Ch Engr)	St. George
Heyward, R. C. (4 T)	Batesburg
Heyward, T. C. (4 ME)	Charlotte, N. C.
Hickerson, R. A. (2 T)	Morris Plains, N. J.
Hicks, W. L. (3 EE)	Mooresboro, N. C.
Hickson, E. L. (1 E)†	Cheraw
Hiers, J. M. (1 V Ag Ed)	Smoaks
Hiers, M. D. (4 EE)	Columbia
Higgins, J. C. (1 Ar)†	Rock Hill
Hilburn, J. E. (1 E)†	Dublin, Ga.
Hill, A. E. (1 E)†	Spartanburg
Hill, D. K. (2 A)	Effingham
Hill, D. N. (2 GS)	Abbeville
Hill, H. B. (2 EE)	Lake City
Hinnant, C. R. (1 A)	Ridgeway
Hinnant, F. K. (2 A)	Ridgeway
Hiott, E. D. (2 EE)	St. Matthews
Hite, C. W. (2 T)	Bennettsville
Hobson, W. M. (1 A)†	Belton
Hodges, H. M. (1 S)†	Bogue Chitto, Miss.
Hodges, J. P. (1 E)†	Blenheim
Hodges, R. F. (3 ME)	Union
Hogue, S. W. (1 E)†	Camden
Holcombe, R. O. (3 T)	Fountain Inn
Holley, E. B. (2 ME)	Aiken
Holley, F. L. (2 A)	Aiken
Holliday, J. C. (1 V Ag Ed)†	Liberty
Holliday, W. W. (1 A)†	Kingstree
Hollingsworth, C. K. (1 V Ag Ed)	Troy
Hollis, H. W. (1 A)†	Rock Hill
Holmes, C. P. (1 V Ag Ed)†	Johnston
Holmes, F. S. (2 EE)	Denmark
Holmes, H. H. (1 GS)†	Conway
Holroyd, R. E. (2 Ar)	Anderson
Holtzendorff, P. B. (2 GS)	Clemson
Hooker, W. P. (1 C)†	Charleston
Hooks, A. V. (1 E)†	Columbia
Hopkins, Sloan (2 V Ag Ed)	Tamassee
Horne, Major (1 A)†	Lake View
Horne, W. L. (2 Ar)	Greenwood
Horner, L. C. (4 GS)	Chester
Horton, C. C. (1 GS)†	Pendleton
Horton, F. H. (2 GS)	Columbia
Horton, J. I. (2 GS)	Columbia
Horton, L. S. (3 V Ag Ed)	Pageland
Horton, R. E. (2 A)	Pageland
Horton, V. F. (1 V Ag Ed)†	Angelus
Horton, W. F. (3 T)	Belton
Houck, J. L. (3 ME)	Cordova
Hough, J. S. (2 V Ag Ed)	Edgefield
Houghton, J. B. (1 E)†	Charleston
Hovis, J. D. (1 TC)†	Greenville
Howard, C. R. (1 TC)†	North Augusta
Howard, F. C. (2 TC)†	Taylors
Howard, J. W. (2 T)	Greenville
Howard, T. G. (4 GS)	Lyman
Howie, J. B. (3 Agr)	Anderson
Hubbard, J. C. (1 T)†	Lancaster
Hubbard, R. C. (3 V Ag Ed)	Seneca
Huckaby, J. P. (3 V Ag Ed)	Enoree
Hudgens, R. L. (3 GS)	Spartanburg
Hudson, B. F. (1 A)†	Timmonsville
Hudson, W. M. (4 Ar)	Spartanburg
Huff, R. B. (3 C)	Charleston
Huffine, J. H. (2 GS)	Nashville, Tenn.
Huggin, F. E. (1 E)†	Gaffney
Huggins, R. B. (2 AH)	Johnsonville
Hughes, D. G. (4 I Ed)	Union
Hughes, Frederick (4 GS)	North Charleston
Hughes, R. A. (1 T)†	Ninety Six
Hughes, S. C. (1 E)†	Hampton
Hughey, J. D. (3 V Ag Ed)	Greer
Huguenin, E. P. (2 V Ag Ed)	Ridgeland

Name and Course	Address
Huiet, W. C. (1 A)†	Johnston
Hunley, C. L. (2 V Ag Ed)	Chesterfield
Hunnicutt, W. C. (1 T)†	Anderson
Hunt, B. D. (3 I Ed)	Westminster
Hunt, E. F. (1 V Ag Ed)†	Dacusville
Hunt, F. M. (3 TIE)	Liberty
Hunt, S. C. (3 EE)	Greenville
Hunter, Bill (2 CE)	Spartanburg
Hunter, E. D. (2 T)	Edisto Island
Hunter, J. C. (3 GS)	Liberty
Hunter, M. R. (1 GS)†	Gray Court
Hunter, R. V. (2 A)	Adams Run
Huntley, D. M. (2 V Ag Ed)†	Ruby
Hurst, F. M. (2 EE)	Anderson
Huskey, J. B. (3 Ar)	Spartanburg
Hutchinson, D. M. (4 ME)	Columbia
Hutchinson, W. C. (1 A)†	Florence
Hyder, B. G. (1 Ar)†	Gaffney
Hyman, J. A. (1 A)†	Pamplico
Inabinet, W. B. (2 ME)	Bishopville
Inabnit, F. H. (2 A)	Orangeburg
Ingram, C. O. (1 E)†	Ridgeland
Irby, G. S. (3 C)	Woodruff
Irby, W. C. (1 E)†	Florence
Irick, E. F. (2 GS)	Elloree
Irwin, W. P. (4 T)	Spartanburg
Ivey, E. M. (3 T)	LaGrange, Ga.
Ivey, J. D. (3 ME)	LaGrange, Ga.
Jackson, C. C. (2 V Ag Ed)	Camden
Jackson, E. C. (2 V Ag Ed)	Starr
Jackson, J. C. (1 V Ag Ed)†	Edgefield
Jackson, Nelson (1 T)†	Tryon, N. C.
Jackson, R. F. (4 Ag Ec)	Sumter
Jackson, R. N. (1 Ar)†	Gray Court
Jackson, S. F. (2 GS)	Atlantic Beach, Fla.
Jackson, W. L. (2 V Ag Ed)	Camden
Jackson, W. O. (3 V Ag Ed)	Starr
Jaeckel, H. E. (2 EE)	Beaufort
James, B. M. (1 E)†	Fort F. E. Warren, Wyoming
James, G. H. (3 T)	Greenwood
Jameson, L. H. (1 T)†	Easley
Jaudon, R. H. (1 E)†	Spartanburg
Jay, J. E. (3 T)	Greenwood
Jeffcoat, B. D. (3 AH)	Florence
Jeffcoat, B. O. (1 V Ag Ed)†	North
Jenkins, M. E. (1 C)†	Charleston
Jenkins, M. I. (2 A)	Yonges Island
Jenkins, S. T. (2 T)	Lando
Jennings, K. B. (1 Ch Engr)†	Charleston
Jernigan, W. A. (1 E)†	Florence
Jessen, H. H. (1 E)†	Summerville
Johnson, A. B. (2 Ar)	Spartanburg
Johnson, C. E. (4 CE)	Newberry
Johnson, F. D. (4 V Ag Ed)	Saluda, N. C.
Johnson, G. A. (1 A)†	Mullins
Johnson, H. A. (2 D)	Aiken
Johnson, H. C. (1 E)†	Trenton
Johnson, H. M. (1 E)†	Bamberg
Johnson, J. F. (1 S)†	Head River, Ga.
Johnson, J. W. (3 V Ag Ed)	Easley
Johnson, L. K. (1 GS)†	Charlotte, N. C.
Johnson, L. M. (3 V Ag Ed)	Edgefield
Johnson, M. C. (4 EE)	Cottageville
Johnson, O. H. (1 A)†	Nesmith
Johnson, R. C. (2 T)	Chappells
Johnston, A. E. (1 E)†	Greenville
Johnstone, E. P. (4 GS)	Newberry
Jolly, G. C. (3 T)	Anderson
Jones, A. W. (1 V Ag Ed)	Nichols
Jones, C. L. (3 ME)	Columbia
Jones, C. M. (4 Agr)	Dacusville
Jones, E. H. (4 V Ag Ed)	Nichols
Jones, E. L. (2 V Ag Ed)	Lake City
Jones, E. M. (4 T)	Greenville
Jones, Guy W. (2 V Ag Ed)	Greenville
Jones, H. C. (3 GS)	Saluda
Jones, H. E. (3 ME)	Pickens
Jones, J. B. (3 Ch Engr)	Buffalo
Jones, J. D. (2 T)	Buffalo
Jones, J. H. (2 Ag Engr)†	Boiling Springs, N. C.
Jones, J. W. (1 E)†	Pickens
Jones, L. F. (4 CE)	Walhalla
Jones, L. T. (1 A)†	Congaree
Jones, R. H. (1 T)†	Greenwood
Jones, R. M. (4 GS)	Saluda
Jones, S. J. (1 E)†	Charleston
Jones, W. I. (1 GS)†	Great Falls
Jordan, B. S. (S)	Clemson
Jordan, J. E. (2 V Ag Ed)	Jefferson
Jordan, L. R. (1 GS)†	Columbia
Jordan, U. B. (1 A)†	Bishopville
Jordan, W. W. (3 V Ag Ed)	Timmonsville
Josey, H. A. (1 T)†	Anderson
Joyce, D. T. (3 AH)	Greenwood
Julian, F. M. (2 GS)†	Central
Kalwitz, M. F. (1 E)†	Park Ridge, Ill.
Kane, J. J. (1 GS)†	Greenwich, Conn.
Kaufman, Alfred (1 T)†	Greenville
Kay, C. W. (1 T)†	Anderson
Kay, R. L. (1 Ch Engr)†	Walhalla
Kay, T. L. (1 E)†	Walterboro
Kearse, F. M. (2 A)	Ehrhardt
Kearse, W. H. (2 ME)	Olar
Kee, J. M. (4 EE)	Rock Hill
Keel, S. T. (3 CE)	Allendale
Keith, W. F. (1 E)†	Anderson
Keitt, B. H. (4 T)	Newberry
Kelley, J. A. (1 Ar)†	Liberty
Kelly, B. N. (1 A)†	Union
Kelly, E. S. (4 T)	Anderson
Kelly, J. G. (2 T)	Rock Hill
Kelly, J. W. (4 D)	Bishopville
Kelly, W. F. (1 CE)	Anderson
Kemp, O. M. (1 E)†	Key West, Fla.
Kendrick, T. F. (1 E)†	Laurens
Kennedy, D. B. (1 E)†	Charleston
Kennedy, G. C. (3 Ag Engr)	New Zion
Kennedy, H. M. (2 T)	New Zion
Kerhulas, T. E. (3 GS)	Union
Kerr, W. E. (1 A)†	Columbia
Kerrison, E. H. (4 AH)	Charleston
Kienzle, W. J. (3 ME)	Bethlehem, Pa.
Kimberly, K. R. (1 S)†	Eastman, Ga.
Kimbrell, M. R. (3 EE)†	Charlotte, N. C.
Kinder, W. C. (1 Ar)†	Kingstree
King, A. P. (2 A)	Ninety Six
King, B. N. (1 V Ag Ed)†	Loris
King, F. M. (4 V Ag Ed)	Seneca
King, G. E. (1 A)	McBee
King, M. L. (1 Ch Engr)†	Clemson
King, R. A. (3 T)	Abbeville
Kirby, G. W. (2 T)	Greenville
Kirby, M. D. (3 Agr)	Timmonsville
Kirby, T. S. (1 A)	Ft. Pierce, Fla.
Kirchner, A. H. (3 GS)	Greenville
Kirk, J. M. (4 V Ag Ed)	Heath Springs
Kirkland, R. W. (2 ME)	Newberry
Kirkpatrick, O. S. (2 V Ag Ed)	Great Falls
Kirton, J. J. (4 Ch Engr)	Cades
Kirven, W. W. (1 Ag Engr)†	Darlington
Kiser, J. P. (1 E)†	Bowman
Kiser, W. R. (1 GS)†	Laurens
Kivett, T. L. (2 Ar)	Greenville
Klinck, J. M. (1 GS)†	North Augusta
Klugh, E. P. (2 T)	Greenwood
Klugh, T. S. (2 T)	Clemson
Kneece, E. H. (1 A)†	Aiken
Kneece, J. D. (1 A)†	Gilbert

Name and Course	Address
Knox, F. T. (4 CE)	Norwood, Pa.
Knox, H. B. (3 T)	Iva
Kolb, K. W. (3 Ch Engr)	Savannah, Ga.
Lachicotte, A. S. (2 TC)	Waverly Mills
Ladd, T. A. (2 TC)	Dawkins
Lafaye, W. L. (4 Ar)	Columbia
LaGrone, W. E. (2 CE)	Johnston
Lambo, A. F. (1 E)†	Cheshire, Conn.
Lancaster, Stanley (2 T)	Spartanburg
Land, J. S. (3 CE)†	Columbia
Lane, C. S. (3 ME)	Timmonsville
Lane, E. E. (1 A)†	Mullins
Lane, J. V. (1 Ch Engr)†	Dillon
Lanford, L. E. (3 V Ag Ed)	Woodruff
Langford, P. W. (4 Hort)	Clemson
Langford, R. H. (2 EE)	Saluda
Langston, V. H. (1 GS)†	Orlando, Fla.
Lapham, J. M. (4 AH)	New Canaan, Conn.
LaRoche, E. A. (1 T)†	Johns Island
Law, W. C. (3 GS)	Hartsville
Lawter, L. B. (1 E)†	Spartanburg
Lawton, C. B. (3 C)	Fairfax
Lawton, J. G. (3 GS)	York
Lawton, M. R. (3 GS)	Garnett
Lawton, P. S. (4 Agr)	Garnett
Lawton, T. O. (4 GS)	Garnett
League, M. R. (1 T)†	Greenville
Leake, F. S. (1 A)†	Fountain Inn
Ledford, R. C. (1 V Ag Ed)†	Gaffney
Lee, J. B. (3 Ar)	Alcolu
Lee, P. E. (4 Ar)	Greenville
Lee, W. L. (4 Ag Engr)	Hamer
Lefler, A. L. (1 TC)†	Spartanburg
Legare, E. V. (1 A)†	Johns Island
Leigh, H. D. (3 ME)	Summerton
LeMaster, H. H. (1 A)†	Gaffney
LeMaster, H. L. (2 A)	Gaffney
Lemmon, J. C. (3 AH)	Winnsboro
Leonard, B. R. (1 V Ag Ed)†	Donalds
Leonhirth, William (2 T)	Sumter
Lesesne, C. B. (1 T)†	Columbia
Lesesne, E. H. (2 CE)	Charleston
Lester, J. R. (1 A)†	Newberry
Lester, J. W. (1 V Ag Ed)†	Saluda
Lester, N. R. (4 V Ag Ed)	Newberry
Lever, J. H. (4 AH)	Columbia
Lever, J. J. (2 A)	Columbia
Lever, J. O. (1 Ag Engr)†	Columbia
Levin, J. H. (3 TC)	Beaufort
Levine, L. J. (1 E)†	Lake City
Lewis, A. D. (1 A)†	Aynor
Lewis, M. E. (1 V Ag Ed)†	Galivants Ferry
Lightsey, J. H. (1 Ag Engr)†	Brunson
Ligon, W. S. (1 T)†	Anderson
Liles, J. R. (3 CE)	McColl
Linder, B. E. (1 V Ag Ed)†	Gaffney
Lindler, H. R. (1 A)†	Chapin
Lindsay, H. N. (1 GS)†	Clemson
Lindsay, J. B. (3 CE)	Clemson
Lindsay, R. J. (3 EE)	Chester
Lindsay, W. D. (1 T)†	Chester
Linge, W. C. (1 E)†	Bethlehem, Pa.
Link, R. A. (1 C)†	Abbeville
Lipscomb, J. B. (4 V Ag Ed)	Ninety Six
Little, J. F. (3 T)	Belton
Little, W. H. (3 WD)	Belton
Littlejohn, A. C. (2 EE)†	Jonesville
Littlejohn, C. E. (3 Ch Engr)	Raleigh, N. C.
Livingston, G. F. (2 Ch Engr)	Leesville
Livingston, R. S. (1 V Ag Ed)†	Woodford
Lockliear, Rhett (1 V Ag Ed)†	Trio
Lominack, E. K. (3 I Ed)	Newberry
London, J. R. (2 T)	Rock Hill
Long, R. A. (2 EE)	Greenwood
Long, R. F. (1 E)†	Bethlehem, Pa.

Name and Course	Address
Loughlin, W. J. (1 E)†	Cos Cob, Conn.
Lovedahl, J. O. (1 S)†	Cowarts, N. C.
Lowder, J. M. (3 V Ag Ed)	Turbeville
Lowe, F. D. (2 GS)	Columbia
Lowe, W. H. (2 T)	Union
Loyless, E. M. (4 T)	Greenwood
Lucas, T. E. (2 T)	York
Lucius, C. G. (1 A)†	West Palm Beach, Fla.
Luellen, J. B. (1 GS)†	New Castle, Ind.
Luhn, W. P. (1 I Ed)†	Charleston
Lybrand, W. M. (1 T)†	Charlotte, N. C.
Lyles, J. T. (4 GS)	Columbia
Lynch, R. M. (2 ME)	East Orange, N. J.
Lynes, J. M. (4 AH)	Fairfax
Lynes, R. M. (3 GS)	Fairfax
Lynn, M. H. (2 A)†	Richburg
Lyon, F. W. (1 V Ag Ed)	Edgefield
Lytton, J. L. (2 ME)	Cheraw
Lytton, K. G. (2 A)	Gastonia, N. C.
McAdams, D. A. (2 T)	Iva
McAlhany, H. J. (4 GS)	Branchville
McAlister, P. W. (2 T)	Spartanburg
McAlpine, L. E. (4 EE)	Union
McCarley, G. H. (4 AH)	Anderson
McClam, R. L. (2 V Ag Ed)	Leo
McClanahan, W. A. (1 C)	Spartanburg
McClure, G. W. (3 Agr)	Beaufort
McClure, J. B. (3 Hort)	Anderson
McConnell, F. F. (1 Ch Engr)†	Anderson
McCord, R. L. (2 GS)	Greenwood
McCorkle, P. H. (4 GS)	York
McCormick, J. D. (1 E)†	North
McCorsley, E. F. (1 C)†	Little River
McCown, K. J. (4 EE)	Anderson
McCoy, J. H. (1 Ar)†	Sumter
McCoy, W. T. (2 T)	Camden
McCrary, R. R. (4 GS)	Clinton
McCrary, W. V. (3 T)	Anderson
McCurry, E. T. (4 EE)	Anderson
McCutchen, L. E. (2 CE)	Union
McCutchen, W. G. (2 V Ag Ed)	Bishopville
McDaniel, W. E. (1 GS)†	Pelzer
McDonald, W. S. (1 E)†	Georgetown
McDowell, E. B. (2 V Ag Ed)	Kershaw
McElveen, N. R. (1 E)†	Columbia
McFadden, J. B. (3 Ag Ec)	Great Falls
McFaddin, Douglass (1 Ag Engr)†	New Zion
McFaddin, N. J. (4 Agr)	Sardinia
McFall, G. R. (2 CE)	Pickens
McGill, J. L. (1 A)†	York
McGinty, W. M. (3 GS)	Clemson
McGowan, S. B. (3 CE)	Columbia
McIntosh, W. A. (3 C)	Summerville
McKagen, O. H. (2 V Ag Ed)	Kershaw
McKee, L. G. (1 TC)†	Chester
McKenzie, G. D. (1 T)†	Florence
McKenzie, J. C. (2 V Ag Ed)	Scranton
McKenzie, S. A. (3 V Ag Ed)	Mullins
McKeown, A. B. (1 Ch Engr)†	Charlotte, N. C.
McKeown, Harry (3 ME)	Spartanburg
McKeown, W. H. (2 T)	Chester
McKinney, H. E. (1 T)	Greenwood
McKinney, J. G. (2 GS)	Georgetown
McKnight, B. G. (2 GS)	Blythewood
McKnight, J. C. (3 GS)	Blythewood
McLaughlin, J. J. (2 ME)	Charleston
McLaulin, B. L. (1 I Ed)†	Kingstree
McLaurin, C. H. (3 C)	St. Matthews
McLaurin, K. F. (3 GS)	St. Matthews
McLean, C. S. (2 T)	Greer
McLean, W. K. (2 V Ag Ed)	Blythewood
McLendon, E. K. (1 E)	Memphis, Tenn.
McLeod, B. F. (4 EE)	Clio
McLeod, R. K. (1 GS)†	Sumter

Name and Course	Address
McLeod, R. R. (2 EE)	Hartsville
McLure, J. W. (1 E)†	Union
McMahan, E. O. (2 C)	Sanford, N. C.
McMakin, G. C. (3 Ch Engr)	Wellford
McMaster, J. F. (2 T)	Winnsboro
McMaster, R. G. (2 A)	Winnsboro
McMillan, G. M. (3 T)	Chattanooga, Tenn.
McMillan, H. C. (1 GS)†	Allendale
McMillan, H. O. (1 Ag Engr)†	Minneapolis, Minn.
McMillan, J. (4 Hort)	Saluda
McMillan, J. A. (2 GS)	Bamberg
McMillan, J. F. (1 C)†	Clinton
McNair, H. S. (2 T)	Patrick
McNair, T. T. (4 GS)	Salley
McNair, W. H. (2 A)	Gable
McPhail, F. E. (3 V Ag Ed)	Iva
McTeer, T. A. (1 E)†	McClellanville
Macartney, O. K. (3 T)	Alta Vista, Va.
Mace, J. S. (2 Ch Engr)	Charleston
Mack, T. L. (1 V Ag Ed)†	Swansea
Mackintosh, D. M. (2 CE)	Rock Hill
Mackintosh, J. D. (4 CE)	McClellanville
Mackintosh, R. H. (1 GS)†	Rock Hill
Macpherson, W. J. (1 E)†	Brunswick, Ga.
Magee, W. W. (4 GS)	Nashville, Tenn.
Mahon, P. M. (4 EE)	Calhoun Falls
Maness, L. E. (2 CE)	Georgetown
Mann, D. H. (1 V Ag Ed)†	Six Mile
Manning, L. W. (3 EE)	Latta
Manning, W. H. (3 Ag Engr)	Barnwell
Manville, E. P. (1 E)†	Tryon, N. C.
Mappus, W. A. (3 C)	Charleston
Marett, H. D. (3 V Ag Ed)	Fair Play
Maroney, J. P. (4 T)	Fountain Inn
Marshall, R. B. (3 GS)	West Union
Martin, C. S. (1 T)†	Greenville
Martin, E. E. (2 A)	Gray Court
Martin, E. F. (2 CE)	New York, N. Y.
Martin, J. C. (1 E)†	Chesnee
Martin, J. L. (2 ME)	Spartanburg
Martin, J. R. (4 ME)	Anderson
Martin, L. C. (2 A)	Walhalla
Martin, T. M. (1 GS)†	Pineville
Martinell, R. A. (2 TC)	Enoree
Marvin, E. A. (4 AH)	Green Pond
Marvin, J. H. (2 T)	Lobeco
Marvin, O. D. (1 Ar)†	Yemassee
Marvin, R. E. (1 E)†	Ritter
Mason, J. L. (1 V Ag Ed)†	Westminster
Mason, W. E. (1 T)	Pacolet Mills
Massey, L. M. (3 EE)	Fort Mill
Mathias, F. T. (1 V Ag Ed)†	Lexington
Mathis, W. H. (3 GS)	Augusta, Ga.
Mattei, F. A. M. (2 GS)†	Santurce, P. R.
Matthews, W. B. (2 A)	Orlando, Fla.
Mauldin, J. A. (1 T)†	Greenville
Mauldin, M. W. (1 I Ed)†	Liberty
Mauney, R. V. (2 TC)	Clover
May, D. R. (3 T)	West Asheville, N. C.
Maybin, A. H. (2 V Ag Ed)	Pomaria
Maynard, B. A. (2 A)	Florence
Mays, H. B. (3 GS)	Fair Play
Mazinski, R. T. (3 CE)	Jersey City, N. J.
Mazo, Earl (3 GS)	Charleston
Meares, J. F. (1 A)†	Nichols
Meeks, C. D. (1 E)†	Anderson
Mellette, E. B. (3 EE)	Sharon
Mellette, R. D. (1 E)†	Sumter
Merritt, H. N. (2 V Ag Ed)	Lake City
Merritt, W. E. (1 GS)†	Augusta, Ga.
Meyers, A. L. (1 E)†	Florence
Milam, C. F. (1 A)†	Mountville
Miles, F. S. (2 V Ag Ed)	Pendleton
Miley, C. C. (4 Hort)	Brunson
Miley, G. F. (1 V Ag Ed)†	Brunson
Miley, W. F. (4 V Ag Ed)	Brunson
Miller, Boyce (S)	Greenville
Miller, G. M. (3 EE)	Greenwood
Miller, H. E. (S)	Ridgeland
Miller, H. F. (2 V Ag Ed)	Jefferson
Miller, J. H. (2 EE)	Columbia
Miller, L. L. (4 V Ag Ed)	Hamer
Miller, M. B. (1 A)†	Nichols
Miller, M. M. (4 I Ed)	Charleston
Miller, W. E. (2 V Ag Ed)	Camden
Mills, C. B. (1 E)†	Cross Hill
Mills, F. C. (3 ME)	Acworth, Ga.
Mills, W. L. (3 V Ag Ed)	Campobello
Milton, S. J. (1 Ch Engr)†	Charleston
Mims, E. H. (2 GS)	Columbia
Mims, P. G. (4 EE)	Lamar
Mitchell, R. E. (2 EE)	Greenville
Mitchell, W. B. R. (4 EE)	Charleston
Mobley, F. B. (3 V Ag Ed)	Lodge
Monckton, W. H. (4 T)	Columbia
Montgomery, J. B. (4 T)	Spartanburg
Moon, C. C. (3 WD)	Spartanburg
Moon, H. D. (3 I Ed)	Westminster
Mooney, W. H. (2 T)	Hawkinsville, Ga.
Moore, E. L. (3 EE)	Clemson
Moore, F. L. (4 C)	Kingstree
Moore, G. S. (3 Ar)	Rock Hill
Moore, G. T. (1 Ar)†	Greenville
Moore, H. B. (1 T)†	Rock Hill
Moore, J. B. (4 CE)	McColl
Moore, R. N. (1 V Ag Ed)†	Calhoun
Moore, W. E. (2 T)	Commerce, Ga.
Moorer, D. F. (3 C)	St. George
Moorer, T. R. (3 Ed)	Charleston
Moorer, W. G. (1 E)†	Florence
Moorer, W. J. (1 I Ed)†	Harleyville
Moorman, R. W. (3 CE)	Clemson
Morgan, A. M. (1 V Ag Ed)†	Piedmont
Morgan, C. C. (1 T)†	McCormick
Morgan, D. C. (4 Agr)	Wellford
Morgan, P. E. (3 GS)	Gaffney
Morgan, R. E. (1 E)†	Plum Branch
Morgan, S. C. (2 A)	Central
Morris, E. W. (1 Ar)†	Greenville
Morris, J. E. (1 A)†	Charlotte, N. C.
Morris, L. D. (2 T)	Olar
Morris, R. F. (1 T)	Charlotte, N. C.
Moss, R. W. (3 GS)	Charleston
Muller, J. C. (3 Ar)	Charleston
Mulling, F. J. (3 Ch Engr)	Pritchardville
Mullins, W. A. (1 T)†	Sylacauga, Ala.
Murph, J. L. (2 CE)	Seneca
Murphree, J. H. (S)	Seneca
Murphy, J. B. (4 GS)	Darlington
Murrah, T. A. (3 GS)	Union
Murray, B. D. (2 TC)	St. George
Myers, C. O. (3 V Ag Ed)	Bowman
Myers, J. B. (2 V Ag Ed)	Orangeburg
Myers, J. H. (3 CE)	Seneca
Myers, R. D. (1 E)†	Orangeburg
Nalley, A. C. (2 T)	Easley
Nally, E. E. (1 V Ag Ed)†	Easley
Nance, P. M. (2 EE)	Anderson
Neely, H. A. (1 E)†	Wellford
Neil, J. M. (2 T)	Rock Hill
Nelson, H. N. (2 T)	Charleston
Nelson, P. H. (3 ME)	Maplewood, N. J.
Nettles, E. E. (1 E)†	Hartsville
Nettles, R. L. (1 E)†	Greenville
Nettles, W. B. (1 V Ag Ed)†	Walterboro
Neuffer, A. M. (1 GS)†	Abbeville
Neville, McCurry (2 GS)	Walhalla
Newell, J. C. (2 ME)	Hemingway
Newman, B. F. (4 I Ed)	McBee

Name and Course	Address
Newman, G. M. (4 GS)	Charlotte, N. C.
Newton, C. G. (3 V Ag Ed)	Myrtle Beach
Newton, Paul (3 I Ed)	Central
Nexsen, S. M. (1 A)†	Kingstree
Nichols, C. W. (2 V Ag Ed)	Ninety Six
Nichols, M. M. (4 C)	Columbia
Nichols, P. W. (4 V Ag Ed)	Saluda
Nicholson, W. S. (4 T)†	Union
Nickles, J. B. (4 GS)	Hodges
Nickles, L. H. (1 E)†	Donalds
Nickles, W. B. (2 A)	Hodges
Nilson, H. A. (3 Ar)	Walterboro
Nims, J. W. (1 E)†	Lancaster
Northrup, W. B. (4 I Ed)	Springfield
Norton, E. R. (1 E)†	Conway
Norton, J. A. (1 E)†	Conway
Nunnery, E. W. (1 V Ag Ed)†	Great Falls
Oates, W. J. (3 Ag Engr)	Chester
O'Brien, G. J. (1 Ar)†	Columbia
O'Dell, D. G. (1 C)†	Spartanburg
O'Driscoll, W. C. (3 EE)†	Charleston
Ogle, J. D. (1 E)†	Sevierville, Tenn.
Okurowski, W. B. (2 GS)	Arlington, N. J.
O'Neal, F. W. (4 Hort)	Anderson
O'Neal, J. B. (2 GS)	Fairfax
O'Neal, S. C. (2 A)	Fairfax
Oricko, M. A. (2 CE)	Bethlehem, Pa.
Orr, J. B. (1 E)†	Hartsville
Orr, J. L. (3 T)	Anderson
Osborne, J. H. (2 CE)	Hardeeville
O'Shields, W. R. (2 T)	Seneca
Osteen, R. T. (2 TC)	Greenville
Oswald, H. C. (3 I Ed)	Lexington
Ouzts, W. D. (1 E)†	Scranton
Owen, S. E. (2 T)	Batesburg
Owen, W. C. (3 V Ag Ed)	Central
Owens, W. O. (2 EE)	St. George
Pace, J. E. (2 V Ag Ed)	Gresham
Padget, W. P. (1 E)†	Richburg
Padgett, C. A. (3 Ch Engr)	Panama City, Fla.
Padgett, E. M. (1 E)†	Tavares, Fla.
Padgett, W. H. (1 GS)†	Columbia
Padgette, C. D. (2 C)	Saluda
Page, N. R. (4 C)	Lake View
Painter, H. L. (2 V Ag Ed)	Chesnee
Palles, M. D. (1 GS)†	Florence
Palmer, G. E. (2 GS)	Allendale
Palmer, J. B. (4 AH)	Sumter
Palmer, N. H. (1 Ch Engr)†	Ridgeway
Park, G. B. (2 A)	Greenwood
Park, W. C. (2 EE)	Winston-Salem, N. C.
Parker, H. B. (1 T)†	Greenwood
Parker, H. C. (4 I Ed)	Crocketville
Parker, J. A. (1 E)†	Hartsville
Parker, J. R. (1 Ag Engr)†	Seneca
Parker, T. M. (1 E)†	Sumter
Parks, J. B. (2 EE)	Fountain Inn
Parnell, S. M. (1 A)†	Timmonsville
Parrish, B. C. (2 T)	Easley
Parrish, J. W. (3 T)	Clover
Parrott, D. L. (3 Ar)	Central
Pasley, J. H. (2 T)	Alexander City, Ala.
Pate, Elilee (2 Ag Engr)	Camden
Patterson, S. P. (4 TC)	Seneca
Paulling, B. M. (2 EE)	St. Matthews
Payne, J. E. (3 T)	Piedmont
Pearce, R. R. (2 GS)	Columbia
Pearman, J. N. (2 ME)	Honea Path
Pearson, B. F. (4 T)	Savannah, Ga.
Pearson, R. L. (3 EE)	Wellford
Peebles, F. E. (4 V Ag Ed)	Camden
Peek, D. H. (1 A)†	Six Mile
Peeling, B. A. (4 Hort)	Harrisburg, Pa.
Pelham, W. E. (2 C)	Greenville
Pendarvis, A. H. (1 GS)†	Harleyville
Pender, M. T. (2 A)	Williston
Penney, J. T. (1 T)†	Charleston
Pennington, C. W. (4 V Ag Ed)	Columbia
Perez, E. F. (4 ME)	Santo Domingo, R. D.
Pericola, R. A. (2 GS)	Charleston
Perna, F. J. (3 CE)	Riverside, Conn.
Perrone, A. J. (1 E)†	San Juan, P. R.
Perry, B. F. (2 A)	Simpsonville
Perry, C. G. (2 Ch Engr)	Florence
Perry, R. A. (1 A)†	Gresham
Perry, R. E. (1 GS)†	Savannah, Ga.
Peterson, T. E. (2 T)	Spartanburg
Pettigrew, J. C. (1 A)	Hodges
Petty, D. M. (1 E)†	Bethlehem, Pa.
Phillips, J. V. (2 CE)	Gaffney
Phillips, S. F. (1 A)†	Lancaster
Pickens, N. D. (1 C)†	Seneca
Pickens, R. E. L. (1 T)†	Greenwood
Pickens, R. G. (1 E)†	Westminster, Md.
Pike, W. W. (1 GS)†	Calhoun
Pinson, W. C. (1 I Ed)†	Greenwood
Pitchford, C. W. (2 CE)	Walhalla
Pittard, L. Y. (1 GS)†	Monticello, Ga.
Pitts, J. J. (2 A)	Newberry
Pitts, J. W. (1 GS)†	Saluda
Pitts, W. R. (2 EE)	Clinton
Planck, C. G. (3 ME)	Charleston
Platt, J. B. (1 E)†	Marion
Platt, J. M. (2 TC)	Wedgefield
Plowden, W. M. (3 ME)	Greenville
Plummer, J. M. (1 GS)†	East Gadsden, Ala.
Plunkett, E. L. (2 EE)†	Fort Moultrie
Poe, W. N. (1 E)†	Greenville
Poole, C. B. (2 ME)	Gaffney
Poole, L. H. (1 T)†	Gaffney
Poore, F. J. (2 TIE)	Ware Shoals
Pope, C. J. (2 T)	Charleston
Pope, D. T. (4 Ag Engr)	Edisto Island
Posey, W. W. (3 T)	Spartanburg
Potter, C. L. (2 Ar)	Tucapau
Potts, J. M. (3 V Ag Ed)†	Young Harris, Ga.
Powers, J. T. (2 Ar)	Summerville
Powers, M. R. (4 Ag Engr)	Marion
Prause, W. K. (4 ME)	Charleston
Pregnall, A. H. (3 CE)	Charleston
Prentiss, W. O. (2 A)	McClellanville
Price, J. E. (1 V Ag Ed)†	Wolfton
Price, T. G. (1 E)†	Praise, Ky.
Price, V. L. (3 GS)	Walterboro
Prichard, H. D. (2 Ag Engr)	Westminster
Prince, C. W. (4 V Ag Ed)	Six Mile
Pritcher, J. R. (4 V Ag Ed)	Holly Hill
Privette, R. V. (1 A)†	Lake View
Propst, M. C. (3 Ch Engr)	Charlotte, N. C.
Propst, R. C. (2 Ch Engr)	Aiken
Prosser, L. M. (1 Ar)†	Kingstree
Pruitt, L. G. (1 T)†	Anderson
Pruitt, S. H. (2 V Ag Ed)	Anderson
Pugh, W. E. (3 D)	Kingstree
Putnam, H. D. (2 T)	Cherryville, N. C.
Quantz, W. P. (3 Ch Engr)	Timmonsville
Quinn, J. W. (1 T)†	St. Matthews
Rabb, J. M. (1 E)†	Greenville
Rabinowitz, Morton (3 GS)	Allendale
Rabon, W. D. (1 S)†	Daytona Beach, Fla.
Radcliffe, J. H. (4 T)	Aiken
Ragsdale, W. J. (3 ME)	Easley
Rain, F. M. (1 E)†	Florence
Rain, W. J. (1 E)	Florence
Rainey, C. W. (4 V Ag Ed)	Starr
Rainey, J. H. (1 A)†	Sharon
Rainville, H. B. (2 TC)	Spartanburg
Ramsey, M. H. (2 T)	Anderson

Name and Course	Address
Randall, R. D. (1 E)†	Rock Hill
Rankin, G. D. (1 V Ag Ed)†	Saluda
Rankin, J. A. (2 V Ag Ed)	Allsbrook
Rankin, J. J. (2 A)	Tamassee
Rankin, J. T. (2 EE)	Greenville
Rast, H. J. (1 A)†	Johns Island
Rast, J. M. (1 A)†	Elloree
Ratcliffe, N. B. (1 E)†	Bethune
Rawl, F. L. (4 V Ag Ed)	Lykesland
Rawl, J. L. (1 Ag Engr)†	Lexington
Rawls, L. T. (2 Ar)	Columbia
Ray, A. B. (1 C)†	Greenville
Raynor, B. E. (1 E)†	West Columbia
Raysor, H. A. (4 C)	Greenville
Rea, G. H. (3 CE)	Bethlehem, Pa.
Reagan, R. P. (3 CE)†—	Weaverville, N. C.
Reaves, A. L. (2 EE)	Bishopville
Redfern, I. C. (2 V Ag Ed)	Chesterfield
Redfern, R. B. (2 V Ag Ed)—	Mt. Croghan
Reece, J. I. (1 V Ag Ed)†	Pickens
Reeder, H. O. (1 Ed)†—	Kannapolis, N. C.
Reid, G. F. (2 EE)	Gaffney
Reid, S. F. (3 AH)	Fort Motte
Rembert, T. H. (1 A)†	Bishopville
Rentz, L. B. (1 E)†	Clemson
Rex, G. L. (3 ME)	Greenville
Reynolds, A. C. (1 V Ag Ed)†	Chesnee
Rhodes, A. P. (2 EE)	Walhalla
Rhodes, L. M. (4 D)	Darlington
Rhodes, T. M. (2 V Ag Ed)	Estill
Rhodes, W. G. (3 ME)	Savannah, Ga.
Rhodes, W. T. (2 TC)	Mayesville
Rhyne, H. S. (1 E)†	Fort Mill
Rhyne, W. A. (3 T)	Greenville
Richard, Leonard (1 E)†	Georgetown
Richards, J. G. (1 Ar)†	Camden
Richardson, J. H. (2 CE)	Georgetown
Richardson, J. L. (1 T)†	Due West
Richardson, J. O. W. (3 V Ag Ed)—	Marion
Richardson, T. R. (1 A)†	Barnwell
Richardson, Thomas (3 ME)	Maplewood, N. J.
Richbourg, W. L. (2 ME)	Liberty
Rickenbaker, M. W. (2 ME)—	Summerton
Riddick, A. T. (2 EE)	Florence
Riddick, P. A. (2 V Ag Ed)	Marion
Riddick, W. R. (1 E)†	Greenwood
Riddle, I. V. (1 S)†	Williamston
Riddle, J. T. (2 GS)	Piedmont
Riley, J. A. (1 A)†	Columbia
Rion, A. H. (2 GS)	Columbia
Rivenbark, R. W. (4 GS)	Marion
Rivers, P. F. (3 CE)	Aiken
Robbins, J. D. (1 T)†	Chester
Robins, J. E. (1 T)†	Greenville
Robinson, D. H. (1 CE)	Chester
Robinson, H. H. (2 T)	Union
Robinson, H. W. (2 A)	St. Matthews
Robinson, J. E. (3 EE)	Florence
Robinson, P. B. (2 A)	St. Matthews
Robinson, W. A. (1 E)†	Greer
Rochester, Steve (1 A)†	Salem
Rodgers, J. R. (2 T)	Taylors
Rodman, E. J. (2 Ag Engr)	Rodman
Roe, J. T. (1 T)†	Travelers Rest
Rogers, D. C. (1 A)†	Pelzer
Rogers, D. H. (2 A)	Blenheim
Rogers, F. E. (2 Ag Engr)	Darlington
Rogers, G. L. (1 A)†	Marion
Rogers, Gaines Madison (1 GS)†	Seneca
Rogers, George McCall (1 I Ed)†—	Williston
Rogers, J. R. (3 ME)	Latta
Rogers, J. S. (1 E)†	Conway
Rogers, L. T. (2 Ch Engr)	Dillon
Rogers, S. S. (1 A)†	Blenheim

Name and Course	Address
Roles, A. W. (1 E)†—	Williamson, W. Va.
Roof, R. C. (1 E)†	Columbia
Roper, D. B. (3 TC)	Laurens
Roper, E. R. (3 TC)	Spartanburg
Roper, F. F. (2 V Ag Ed)	Pickens
Rosenkrans, D. B. (2 GS)	Clemson
Ross, D. J. (2 T)	West Columbia
Ross, E. A. (2 T)	Garnett
Ross, George (2 Ar)	Greenville
Ross, H. J. (3 V Ag Ed)	Summerton
Rouse, W. A. (4 D)	Luray
Rozier, W. R. (1 Ag Engr)†	Cassatt
Rucker, R. J. (1 Ag Engr)†—	St. Matthews
Rumph, W. P. (1 GS)†	Charleston
Rumsey, A. H. (1 Ch Engr)†	Greenville
Rushing, B. T. (3 T)	Estill
Rutland, L. E. (2 V Ag Ed)	Batesburg
Rutledge, F. A. (2 CE)	Charleston
Rutledge, T. B. (2 EE)	Charleston
Safy, G. J. (2 CE)	Greenville
Salley, H. G. (4 T)	Buffalo
Salley, R. G. (2 Ag Engr)	Orangeburg
Salley, W. B. (2 I Ed)	Orangeburg
Salvo, G. C. (4 Hort)	Charleston
Sams, B. B. (1 E)†	Mt. Pleasant
Sanders, A. W. (3 Ch Engr)—	Savannah, Ga.
Sanders, F. W. (2 T)	Camden
Sanders, H. W. (1 Ch Engr)†	Laurens
Sanders, J. R. (4 Agr)	Anderson
Satcher, J. A. (1 A)†	Ward
Scarborough, F. B. (1 V Ag Ed)†	Bishopville
Scarborough, F. H. (4 Ag Engr)—	Bishopville
Scarborough, R. W. (3 ME)	Buffalo
Schmidt, J. E. (3 GS)	Clemson
Schroder, F. E. (1 Ar)†	Cranford, N. J.
Scott, B. E. (4 Ag Engr)	Spartanburg
Scott, R. A. (1 E)	Biddeford, Me.
Scott, T. A. (1 V Ag Ed)†	Honea Path
Seabrook, P. D. (2 A)	Johns Island
Seabrook, W. C. (4 EE)	Hazleton, Pa.
Sedberry, B. R. (1 E)†	Hartsville
Segars, A. L. (2 A)	Hartsville
Segars, R. B. (1 T)†	Oswego
Seigler, J. P. (1 E)†	Starr
Sellers, A. R. (2 EE)	Florence
Sells, C. K. (3 T)	Charleston
Senn, T. A. (1 E)†	Laurens
Senn, T. L. (4 Hort)	Newberry
Settle, H. H. (2 A)	Inman
Sexton, J. D. (1 E)†	Laurens
Seyle, F. W. (1 E)†	Savannah, Ga.
Shaffer, E. T. (2 CE)	Walterboro
Sharp, J. D. (2 A)	Anderson
Sharpe, R. G. (3 T)	Abbeville
Sharpe, W. B. (3 C)	Orangeburg
Shealy, C. D. (3 I Ed)	Prosperity
Shealy, J. L. (4 Agr)	Batesburg
Shealy, M. C. (3 Agr)	Batesburg
Shealy, R. H. (1 E)†	Carlisle
Shealy, W. L. (3 Ch Engr)	Batesburg
Shell, V. M. (4 Ar)	Arden, N. C.
Shelley, R. C. (3 Agr)	Marion
Shelor, T. B. (1 E)†	Walhalla
Shepherd, E. W. (4 GS)	Savannah, Ga.
Sherard, J. H. (1 GS)†	Abbeville
Sherman, J. T. (1 V Ag Ed)†	Easley
Shirley, G. E. (2 CE)	Anderson
Shirley, J. T. (2 EE)	Anderson
Shirley, James A. (2 EE)	Westminster
Shirley, Joe A. (3 TC)	Bath
Shirley, LeRoy (2 Ag Engr)	Anderson
Shirley, W. K. (1 T)†	Belton
Shiver, W. B. (1 V Ag Ed)†—	Eustis, Fla.
Shuford, P. H. (1 I Ed)†—	Lincolnton, N. C.
Shuler, Glenn (2 A)	St. Matthews

Name and Course	Address
Shuler, H. A. (1 E)†	Orangeburg
Shurtleff, S. J. (2 TIE)—	Fairhaven, Mass.
Simkins, J. E. (3 T)	Columbia
Simmons, C. L. (2 Ch Engr)—	Spartanburg
Simmons, M. F. (2 TC)	Greer
Simms, W. G. (1 T)	Summerton
Simpson, A. T. (3 V Ag Ed)	Blaney
Simpson, D. N. (2 V Ag Ed)	Iva
Simpson, H. V. (2 TC)	Anderson
Simpson, J. F. (1 A)†	Chester
Simpson, J. H. (1 E)†	Whitmire
Simpson, J. L. (2 A)	Iva
Simpson, R. A. (1 Ag Engr)†	Chester
Sims, C. M. (1 GS)†	Cowpens
Sims, J. J. (2 Ch Engr)	Easley
Sims, R. Y. (1 E)†	Memphis, Tenn.
Singletary, J. B. (2 A)	Coward
Sistare, F. W. (1 E)†	Lancaster
Skardon, J. W. (1 GS)†	Walterboro
Skardon, S. L. (4 GS)	Walterboro
Sloan, D. H. (1 A)†	Smithboro
Sloan, R. A. (4 Agr)	Marion
Small, W. O. (1 V Ag Ed)†—	Heath Springs
Smart, W. W. G. (1 C)†	Shelby, N. C.
Smith, A. W. (4 T)	Anderson
Smith, C. E. (2 GS)	Ridgeland
Smith, D. T. (3 Ch Engr)	Abbeville
Smith, D. W. (2 EE)	Williston
Smith, E. H. (2 EE)	Johnston
Smith, E. N. (1 Ch Engr)†	Greenville
Smith, G. L. (3 GS)	Springfield
Smith, H. D. (2 WD)	Greenville
Smith, H. W. (1 E)†	Pageland
Smith, J. G. (4 T)	Clearwater
Smith, J. K. (4 TC)	Seneca
Smith, L. B. (3 GS)	Rainelle, W. Va.
Smith, L. C. (3 T)	Greenville
Smith, L. G. (1 E)†	Kannapolis, N. C.
Smith, M. T. (3 EE)	Walhalla
Smith, P. F. (2 Ch Engr)	Summerville
Smith, R. A. (2 V Ag Ed)	Fair Play
Smith, R. B. (1 E)†	Charleston
Smith, R. D. (2 V Ag Ed)	Bowman
Smith, T. L. (3 GS)	Charleston
Smith, W. E. (2 Ed)	Salem
Smith, W. H. (2 Ch Engr)—	New Holland, Ga.
Smith, W. T. (2 V Ag Ed)	Winnsboro
Smoak, R. A. (2 EE)	Branchville
Snead, A. J. (2 CE)	Greenwood
Snell, A. H. (4 Hort)	Elloree
Snipes, G. L. (3 V Ag Ed)	Seneca
Somers, H. L. (3 V Ag Ed)†	Ivy, N. C.
Somerville, A. W. (1 E)†	McConnellsville
Sosnowski, J. R. (1 C)†	Johns Island
Sottile, S. V. (3 CE)	Charleston
Sottile, V. N. (1 E)†	Charleston
Southerlin, J. R. (2 CE)	Greenville
Sparks, L. M. (2 A)	Gaffney
Spearman, F. A. (1 C)†	Williamston
Spears, J. C. (1 Ch Engr)†	Jonesville
Speissegger, C. F. (2 C)	Charleston
Spires, C. E. (3 WD)	Hartsville
Spivey, E. P. (1 V Ag Ed)†	Loris
Spratt, J. L. (1 GS)	York
Sprouse, M. N. (1 E)†	Anderson
Stafford, G. H. (2 ME)	Latta
Staley, G. C. (4 ME)	Gray Court
Stallworth, J. M. (3 GS)	St. Matthews
Stanfield, T. F. (4 GS)	Cordova
Stanford, G. W. (4 CE)—	Greensboro, N. C.
Stanford, M. C. (2 GS)	Atlanta, Ga.
Stansill, J. T. (1 V Ag Ed)†	Eastover
Starnes, J. O. (1 A)†	Lancaster
Starr, D. L. (2 GS)	Walterboro
Steedly, H. D. (1 E)†	Bamberg
Steele, E. D. (1 V Ag Ed)†	Six Mile
Steele, R. N. (1 T)†	Fairhaven, Mass.
Sterghos, J. D. (2 EE)	Greenwood
Stevenson, J. H. (2 TC)	Marion
Stevenson, T. F. (1 GS)†	Columbia
Stewart, E. R. (3 V Ag Ed)—	Fountain Inn
Stewart, M. A. (1 TC)†	Rock Hill
Stewart, T. H. (2 V Ag Ed)	Six Mile
Stokely, D. R. (S)	Clemson
Stokes, C. A. (1 E)†	Greer
Stokes, F. H. (2 V Ag Ed)	Darlington
Stokes, W. H. (4 V Ag Ed)	Greer
Stone, L. T. (1 V Ag Ed)†	Marion
Stone, R. L. (4 GS)	Central
Stone, W. S. (1 T)	Greenville
Stoudemire, G. A. (3 V Ag Ed)	Little Mountain
Stover, E. L. (1 C)†	Winnsboro
Strauss, E. M. (1 E)†	Newberry
Strawhorn, Harold (1 E)†	Bradley
Stribling, F. D. (1 A)†	Westminster
Stribling, J. F. (2 Ag Engr)	Westminster
Stribling, S. P. (3 V Ag Ed)—	Westminster
Stribling, T. E. (1 T)†	Habersham, Ga.
Strickland, J. M. (3 TC)†	Starr
Strickland, O. K. (3 V Ag Ed)	Nichols
Stricklin, T. S. (2 ME)	Richburg
Stroud, W. C. (3 V Ag Ed)†	Richburg
Stubblefield, Hord (3 Ar)	Greenwood
Sturgis, E. C. (4 Ent)	Rock Hill
Sturgis, H. L. (1 T)†	Rock Hill
Styron, W. T. (2 ME)	Columbia
Sullivan, J. E. (4 T)	Anderson
Sullivan, J. W. (2 T)	Lodge
Sullivan, O. E. (3 T)	Gaffney
Sullivan, R. J. (2 GS)	Anderson
Sullivan, R. P. (1 T)†	Gaffney
Summerbell, W. E. (4 ME)	Charleston
Summers, C. B. (3 GS)	Columbia
Sutton, A. D. (3 CE)	Fort Mill
Sutton, C. B. (3 ME)	Columbia
Swearingen, J. C. (2 V Ag Ed)	Trenton
Sweat, C. H. (4 V Ag Ed)	Walterboro
Sweeny, J. O. (4 EE)	Anderson
Switzer, J. E. (3 V Ag Ed)	Roebuck
Talbert, J. N. (4 T)	Troy
Talbert, T. W. (4 GS)	Columbia
Tarleton, H. J. (1 T)†	Maplewood, N. J.
Tate, D. H. (1 E)†	Rock Hill
Taylor, C. B. (1 V Ag Ed)	Nichols
Taylor, J. O. (2 V Ag Ed)	Mt. Croghan
Taylor, R. H. (1 E)†	Aspinwall, Pa.
Taylor, W. L. (1 GS)†	Columbia
Templeton, W. D. (1 T)†	Williamston
Terry, J. R. (1 E)†	Fountain Inn
Terry, W. B. (4 EE)	Cheraw
Terry, W. M. (4 Ent)	Martins
Thackston, J. E. (2 ME)	Greenville
Thackston, W. H. (4 T)	Anderson
Thames, F. H. (1 Ch Engr)†	Charleston
Theodore, James (3 I Ed)	Greenville
Theodore, John A. (1 Ar)†	Greenville
Thode, F. W. (3 Hort)	Walhalla
Thomas, A. E. (1 T)†	Georgetown
Thomas, E. H. (4 T)	Prosperity
Thomas, G. G. (1 E)†	Rock Hill
Thomas, H. H. (1 S)†	Carrollton, Ga.
Thomas, H. J. (4 V Ag Ed)	Hodges
Thomas, R. C. (4 V Ag Ed)	Lamar
Thomas, R. L. (2 T)	Spartanburg
Thomason, J. E. (3 V Ag Ed)†	Marietta
Thompson, B. G. (2 ME)	Hardeeville
Thompson, C. W. (3 V Ag Ed)—	Reevesville
Thompson, F. A. (4 T)	Williston
Thompson, G. E. (1 Ag Engr)†	Chesnee
Thompson, J. L. (1 TC)†	North Augusta

Name and Course	Address
Thompson, J. S. (1 V Ag Ed)	Bucksville
Thompson, J. W. (1 V Ag Ed)†	Bowman
Thompson, L. B. (1 TC)†	North Augusta
Thomson, B. F. (4 GS)	Landrum
Thornburg, R. W. (2 ME)	Greenville
Thornley, W. H. (1 Ed)	Moncks Corner
Thornton, C. C. (3 C)	Union
Thrower, A. M. (1 E)†	Ridgeville
Thurman, D. R. (1 S)†	Whiteside, Tenn.
Timmerman, R. P. (2 TC)	Vaucluse
Timmons, C. T. (2 T)	Abbeville
Tingle, A. M. (1 E)†	Asheville, N. C.
Tingle, W. B. (1 E)†	Ora
Tisdale, C. F. (2 A)	Bryson City, N. C.
Todd, A. L. (1 T)†	Anderson
Todd, C. E. (1 GS)†	Fairfax
Todd, Roy (3 V Ag Ed)	Loris
Todd, Rudolph (1 E)†	Loris
Tokunaga, R. L. (1 A)†	Columbia
Tomlinson, S. O. (1 V Ag Ed)†	Lynchburg
Toncray, J. H. (2 T)	Johnson City, Tenn.
Townsend, C. R. (2 A)	Blenheim
Townsend, J. R. (4 V Ag Ed)	Blenheim
Trammell, W. V. (2 Ch Engr)	Anderson
Traylor, H. C. (1 GS)†	Winnsboro
Traywick, H. V. (4 I Ed)	Cameron
Trexler, B. D. (2 Ed)	Greenville
Trimmier, J. D. (1 T)†	Inman
Triplett, C. H. (2 Ag Engr)	Chester
Tripp, J. H. (1 TC)†	Belton
Trobaugh, A. K. (2 ME)	Brunswick, Ga.
Trobaugh, H. E. (2 GS)	Brunswick, Ga.
Troy, H. P. (4 GS)	Elloree
Truesdale, J. M. (2 V Ag Ed)	Kershaw
Truett, E. C. (2 V Ag Ed)†	Timmonsville
Truluck, J. W. (3 V Ag Ed)	Coward
Tuck, E. S. (1 S)†	Spartanburg
Tucker, W. E. (2 GS)†	Greenville
Tupper, B. A. (1 E)†	Rembert
Turner, C. A. (2 T)	Fort Mill
Turner, C. G. (1 E)†	Homestead, Fla.
Turner, G. M. (3 TC)	Greenville
Turner, H. G. (1 A)†	Travelers Rest
Turner, N. L. (3 Hort)	White Hall
Turner, W. C. (2 ME)	Piedmont
Upchurch, H. B. (2 T)	Athens, Ga.
Valentine, H. P. (1 T)†	Washington, D. C.
Vann, L. W. (1 A)†	Trenton
Vansant, V. W. (3 V Ag Ed)†	Ward
Van Wyck, W. O. (3 GS)	Covina, Cal.
Varn, A. H. (1 E)†	Charleston
Vassey, H. M. (3 V Ag Ed)	Chesnee
Vaughan, C. L. (4 Ar)	Clinton
Vereen, C. M. (1 V Ag Ed)†	Latta
Vereen, L. C. (2 CE)	Latta
Vernon, R. H. (1 V Ag Ed)†	Travelers Rest
Vess, M. W. (1 S)†	Eton, Ga.
Vicaria, Jorge (3 T)	Clemson
Vickery, J. B. (2 V Ag Ed)	Central
Vickery, V. V. (4 V Ag Ed)	Central
Vincent, C. A. (3 Ag Ec)	Lynchburg
VonHollen, C. H. (1 E)†	Greenville
VonHollen, J. M. (1 E)	Greenville
Von Weller, G. S. (2 GS)	Albany, Ga.
Wade, W. B. (3 GS)	Clinton
Wakefield, D. C. (3 T)†	Anderson
Wakefield, J. B. (3 Agr)	Iva
Walden, A. R. (1 A)†	Landrum
Walker, M. E. (2 A)	Rock Hill
Walker, R. H. (2 EE)	Appleton
Wallace, J. R. (1 E)†	Central
Wallace, J. W. (2 V Ag Ed)	Hamer
Wallis, G. C. (1 T)†	Waycross, Ga.
Wannamaker, R. C. (3 Agr)	St. Matthews
Ward, H. E. (3 Ag Engr)	Darlington
Ware, E. E. (1 GS)†	Greenville
Waring, Hampton (1 E)†	Summerville
Warner, C. T. (3 ME)	Greenwood
Warren, J. H. (2 GS)	Charleston
Washington, W. M. (1 E)†	Honea Path
Waters, G. H. (3 T)	Johnston
Waters, L. E. (4 WD)	Clemson
Watkins, M. D. (1 GS)†	Westminster
Watkins, M. H. (1 E)†	Pendleton
Watson, F. M. (1 GS)†	Griffin, Ga.
Watson, J. B. (1 A)†	Anderson
Watson, J. D. (4 Agr)	Florence
Watson, J. E. (1 C)†	Gaffney
Watson, J. F. (2 Ch Engr)	Greenwood
Watson, M. B. (1 E)†	Greenville
Watson, P. S. (4 V Ag Ed)	Ridge Spring
Watson, R. W. (4 EE)	Spartanburg
Watts, J. M. (1 V Ag Ed)†	Moncks Corner
Way, H. G. (1 A)†	Hemingway
Way, W. A. (4 EE)	Clemson
Wearn, W. C. (2 EE)	Newberry
Weaver, A. E. (2 ME)	Jacksonville, Fla.
Webb, B. L. (3 CE)	Beaufort
Webb, G. R. (2 CE)	Saluda
Webb, H. N. (3 Ar)	Anderson
Webb, H. W. (2 CE)	Saluda
Webster, F. S. (1 Ch Engr)†	Greenville
Webster, S. R. (2 EE)	Mullins
Weinheimer, R. J. (1 E)†	Erie, Pa.
Welch, F. R. (1 E)†	Charleston
Welch, R. W. (2 ME)	Kingstree
Wells, F. E. (3 V Ag Ed)	Greenwood
Wentzel, D. B. (2 EE)	Clemson
West, E. C. (3 V Ag Ed)	Conway
West, F. T. (1 E)†	Marion
West, H. D. (1 A)†	Bowman
West, I. W. (1 Ch Engr)†	Gresham
West, T. P. (3 T)	Greenville
Whall, R. F. (1 Ch Engr)†	San Juan, P. R.
Wham, G. S. (2 TC)	Mountville
Wheeler, C. D. (2 EE)†	Augusta, Ga.
Wheeler, G. A. (2 A)	Spartanburg
Wheeler, G. C. (2 A)	Saluda
Wheeler, R. F. (2 V Ag Ed)	Batesburg
Whisenant, J. E. (2 EE)	Spartanburg
Whisnant, C. L. (3 TC)	Charlotte, N. C.
White, E. T. (1 E)†	Belton
White, J. R. (1 A)†	Sumter
White, R. J. (1 E)†	Winnsboro
White, T. P. (1 Ch Engr)†	Gough
White, W. C. (1 E)†	Rock Hill
Whitehead, H. C. (3 T)	Graniteville
Whitehead, J. B. (2 EE)	Graniteville
Whitesell, C. H. (2 GS)	Blacksburg
Whitlock, F. M. (4 V Ag Ed)	Easley
Whitmire, A. P. (4 EE)	Pickens
Whitney, J. T. (4 I Ed)	Union
Whitten, M. W. (1 V Ag Ed)†	Salem
Wiggins, R. C. (1 T)†	Hopkins
Wigington, W. H. (2 EE)	Anderson
Wiles, W. C. (4 Ed)	Columbia
Wilks, J. L. (4 Ch Engr)	Charleston
Williams, A. V. (3 GS)	Charleston
Williams, G. E. (1 T)†	Greenville
Williams, G. L. (1 V Ag Ed)†	Neeses
Williams, G. M. (4 C)	Charleston
Williams, G. P. (1 E)†	Kingstree
Williams, H. C. (1 C)†	Seneca
Williams, J. C. (2 A)	Norway
Williams, L. A. (1 Ch Engr)†	Olar
Williams, S. B. (3 V Ag Ed)	Greer
Williams, W. C. (1 E)	Swansea
Williamson, B. P. (1 E)†	York
Williamson, L. A. (4 ME)	Ridgewood, N. J.
Williamson, S. A. (2 I Ed)	Aiken

Name and Course	Address
Willimon, E. L. (1 Ar)†	Florence
Willis, D. J. (3 Ed)	Travelers Rest
Willis, J. W. (2 ME)	Lynchburg
Willis, M. D. (4 ME)†	Spartanburg
Wilson, B. R. (1 A)†	Darlington
Wilson, C. L. (2 V Ag Ed)	Fort Mill
Wilson, C. P. (1 Ed)†	Ridgeland
Wilson, E. F. (2 EE)	Abbeville
Wilson, E. H. (2 V Ag Ed)	Blythewood
Wilson, H. B. (2 GS)	Abbeville
Wilson, H. S. (2 EE)	Calhoun Falls
Wilson, J. E. (1 V Ag Ed)†	Pendleton
Wilson, J. L. (1 V Ag Ed)†	Lancaster
Wilson, J. M. (1 GS)†	Charleston
Wilson, R. B. (1 E)†	Piedmont
Wilson, T. V. (1 Ag Engr)†	Piedmont
Wilson, W. C. (2 A)	Atlanta, Ga.
Wily, R. R. (2 ME)	Bethlehem, Pa.
Winburn, J. D. (1 A)	Hartsville
Winburn, R. G. (1 V Ag Ed)†	Hartsville
Windham, J. M. (4 ME)	Edisto Island
Winfield, J. A. (3 ME)	Stony Creek, Va.
Wise, J. M. (1 Ag Engr)†	Elko
Wise, W. R. (4 EE)	Newberry
Wofford, W. G. (1 A)†	Hartsville
Wolfe, J. W. (2 A)	Orangeburg
Wolfe, R. S. (4 CE)	Orangeburg
Wood, F. A. (2 T)	Newberry
Wood, W. D. (2 A)	Bennettsville
Woodhurst, R. S. (1 Ar)†	Abbeville
Woodruff, B. E. (1 Ch Engr)†	Darlington
Woods, Charles (4 ME)	Savannah, Ga.
Woods, T. D. (3 ME)	Fort Mill
Woodward, Jesse E. (2 ME)	Conway
Woodward, Joe E. (2 EE)	Greenville
Woodward, L. J. (3 EE)	Anderson
Woody, R. E. (2 ME)	Charleston
Wootan, L. A. (2 A)	Smiths Turn Out
Workman, W. D. (2 ME)	Clinton
Wray, C. V. (3 T)	Clemson
Wright, C. K. (1 E)†	Columbia
Wright, C. R. (2 GS)	Gastonia, N. C.
Wright, E. E. (1 E)†	Sumter
Wright, J. G. (1 GS)†	Anderson
Wright, L. C. (4 ME)	Columbia
Wright, L. S. (1 E)†	Johnston
Wright, M. E. (3 GS)	Fredericksburg, Va.
Wright, T. C. (1 V Ag Ed)†	Ward
Wyant, Y. W. (4 V Ag Ed)	Ninety Six
Wyndham, F. E. (2 A)	Moncks Corner
Yarborough, B. H. (3 C)	Winnsboro
Yarid, S. K. (2 Ch Engr)	Seneca
Yeargin, B. F. (1 T)†	Ware Shoals
Yelton, L. M. (3 Ag Ec)	Eastover
Yonce, C. Z. (1 E)	Edgefield
Young, Edward L. (2 A)	Timmonsville
Young, Ernest L. (4 EE)	Fairfax
Young, F. G. (3 Hort & V Ag Ed)†	Hamilton, Ala.
Young, H. H. (1 GS)†	Fairfax
Young, J. G. (1 GS)†	Florence
Young, L. W. (1 Ar)†	Asheville, N. C.
Young, T. B. (4 Ag Ec)	Florence
Zeigler, A. E. (1 T)†	Columbia
Zeigler, C. M. (3 T)	St. Matthews
Zeigler, J. S. (2 ME)	Florence
Zeigler, W. B. (4 I Ed)	Florence
Zerbst, H. C. (2 A)	Charleston
Zimmerman, C. H. (1 TC)†	St. Matthews

NUMBER OF STUDENTS MAJORING IN EACH CURRICULUM

First Semester 1938-1939

Class	Agriculture	Agricultural Engineering	Chemistry	Architecture	Engineering (Unclassified)	Chemical Engineering	Civil Engineering	Electrical Engineering	Mechanical Engineering	General Science	Textile Engineering	Textile Chemistry and Dyeing	Weaving and Designing	Vocational Agricultural Education	Education	Industrial Education	Textile Industrial Education	Special	Enrollment by Classes
Senior	52	7	9	11		5	13	24	21	42	33	6	4	46	2	12			287
Junior	34	8	13	16		15	27	27	36	47	61	15	4	62	3	14	1		383
Sophomore	96	20	9	19		26	40	63	57	56	92	27	3	81	3	8	3	1	604
Freshman	114	27	29	26	234	33				87	98	18		111	6	20		18	821
Special																		13	13
Totals	296	62	60	72	234	79	80	114	114	232	284	66	11	300	14	54	4	32	2108

ENROLLMENT BY COUNTIES AND STATES

FIRST SEMESTER 1938-1939

County	*Total*
Abbeville	33
Aiken	37
Allendale	22
Anderson	137
Bamberg	13
Barnwell	16
Beaufort	16
Berkeley	7
Calhoun	23
Charleston	105
Cherokee	32
Chester	32
Chesterfield	25
Clarendon	18
Colleton	23
Darlington	37
Dillon	25
Dorchester	22
Edgefield	23
Fairfield	23
Florence	75
Georgetown	15
Greenville	139
Greenwood	64
Hampton	23
Horry	37
Jasper	10
Kershaw	27
Lancaster	19
Laurens	41
Lee	24
Lexington	27
Marion	32
Marlboro	20
McCormick	5
Newberry	34
Oconee	85
Orangeburg	73
Pickens	71
Richland	93
Saluda	32
Spartanburg	101
Sumter	31
Union	31
Williamsburg	29
York	59
South Carolina Total	1866

State or Country	*Total*
Alabama	4
California	2
Connecticut	6
Cuba	1
Delaware	1
District of Columbia	4
Florida	21
Georgia	59
Illinois	1
Indiana	1
Kentucky	2
Maine	1
Massachusetts	2
Minnesota	1
Missouri	1
New Jersey	9
New York	4
North Carolina	71
Panama	1
Pennsylvania	19
Puerto Rico	4
Santo Domingo	1
South Carolina	1866
Tennessee	15
Virginia	6
Washington	1
West Virginia	3
Wyoming	1
Grand Total	2108

*SUPPLEMENTARY LIST OF STUDENTS, SECOND SEMESTER, 1938-1939

Badia, J. P. (1 Ar)†----------Santurce, P. R.
Barton, L. M. (2 EE)----------Taylors
Blanton, H. P. (3 A)----------Gaffney
Bush, S. M. (3 TC)----------Colquitt, Ga.
Carrigan, E. W. (2 GS)----------Society Hill
Casserly, J. J. (1 TC)†------Flushing, N. Y.
Derrick, F. B. (4 GS)----------Clayton, Ga.
Dillard, T. W. (4 V Ag Ed)----------Liberty
Dunn, M. F. (1 TE)----------Chester
Earnest, W. M. (1 C)†----------Atlanta, Ga.
Evans, J. H. (2 CE)----------Bennettsville
Fain, S. Z. (1 TE)†--------Brooklyn, N. Y.
Flink, H. H. (1 Ch Engr)†--Cos Cob, Conn.
Garrett, E. B. (1 A)†--------New Roads, La.
Gregory, W. W. (2 TE)----------Inman
Grubb, L. G. (1 TC)†------Salisbury, N. S.
Herlong, J. B. (3 V Ag Ed)--------Johnston
Keels, D. W. (1 GS)†----------Ridgeville
Kerchmar, A. (2 C)----------Bethlehem, Pa.
Kloman, C. (1 V Ag Ed)†-----Bellevue, Pa.
Knox, J. B. (1 TE)----------Chester
Lawrence, J. M. (1 A)----------Seneca
Lightsey, J. H. (3 A)----------Fairfax
McGregor, W. C. (4 GS)----------Anderson
McKesson, E. L. (2 Ag Engr)†
Petersburg, Va.
McKinney, W. R. (3 Ag Engr)------Chesnee
Madden, J. W. (2 CE)----------Belton
Monk, F. S. (1 TE)†----------Columbus, Ga.
Morgan, T. W. (S)----------Clemson
Nichols, H. D. (1 A)-----White Pine, Tenn.
Outz, G. (2 V Ag Ed)----------Fair Play
Reynolds, C. M. (1 V Ag Ed)†--Scotts, N. C.
Robbins, I. D. (3 CE)†----------Seneca
Rogers, J. M. (2 Ag Engr)†----------Clio
Scott, E. B. (2 GS)----------Marion
Snyderman, F. L. (1 TE)†--Philadelphia, Pa.
Sosa, R. (1 Ar)†----------Santurce, P. R.
Stewart, E. D. (1 GS)†----------Greenville
Yearout, W. T. (1 V Ag Ed)†
Lenoir City, Tenn.

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*Students enrolled for the second semester who were not enrolled for the first semester. In this list, students are classified according to their credits at the beginning of the second semester; new students admitted at the beginning of the second semester are indicated by a dagger (†). This list includes only those second semester students who matriculated prior to February 9, 1939.

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